VOL. CCXXXV, No. 3055
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THE SPHERE
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OCTOBER 18, 1958

The SPHERE

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— THE WORLD'S NEWS IN PICTURES

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The finance of the building industry and its innumerable associated trades is a very substantial part of our business, and it is proper that money should be in the forefront of the picture. We take pride in our share in this, and indeed in every other kind of industrial enterprise, but our part is primarily a financial one; for after all, our business is money.

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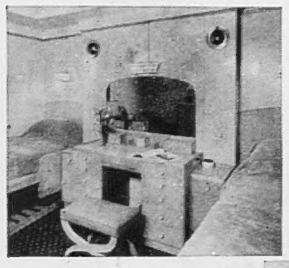
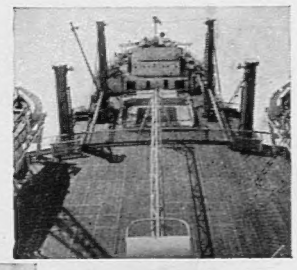


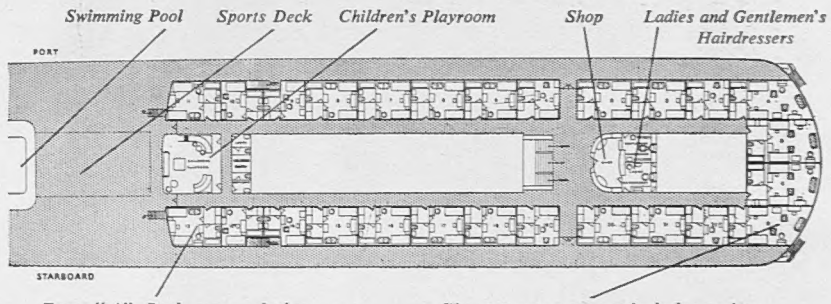
A typical double-room on "The City of Exeter." Cabins on Ellerman ships are on either "A" or "B" decks . . . light, airy and beautifully appointed.



The "City of Durban" restaurant spans the full width of the ship and seats all passengers at one service.

The Sports deck on the "City of Port Elizabeth": all "City" class passenger ships on the South Africa run have a swimming-pool, promenade deck, drawing-room, smoke-room, library and a well-stocked ships' shop and hairdressing salons.

"A" DECK ON A "CITY" CLASS SHIP



Every "A" Deck room, whether "single" or "double," has a private bathroom and toilet en suite.

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Approximately every fourteen days an Ellerman "City" class ship sails for South Africa, Lourenco Marques and Beira. Passage rates are competitive . . . an outside double room, for example, with private bathroom *en suite*, is £155 (£125 on a 12-passenger vessel). Full information can be obtained from Ellerman Lines, Passenger Office, 29/34, Cockspur Street, London, S.W.1, or from all shipping and travel agents.

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TGA A5315

Volume CCXXXV No. 3055

The SPHERE, London, October 18, 1958

The SPHERE

with which is incorporated THE GRAPHIC

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LAST TRIBUTES AT THE VATICAN—POPE PIUS XII LIES IN STATE: **Crowds file past the catafalque before the high altar in the Basilica of St. Peter in the Vatican City. The body, dressed in pontifical robes, is placed high on the red-draped catafalque, and is surrounded by twenty-four tall candles. Members of the Noble Guard and the Swiss Guard keep watch. The embalmed body had been borne in solemn procession through Rome. Crowds packed the route as the coffin was carried into St. Peter's at dusk.**

Silent crowds watched the body of Pope Pius XII borne in solemn procession through the city of Rome. About a quarter of a million spectators gathered in the square before St. Peter's to watch the final journey through the huge gates. The main procession from Castel Gandolfo passed by the Colosseum. There, as a young priest, Eugenio Pacelli used to walk and read his office. The embalmed body was contained in a triple coffin, the first of red cypress, the second of lead and the third of polished elm. Surmounting the hearse were four golden cherubs and a replica of the Papal crown. In the artificial light created by the floodlights for news-reel and television cameras, the crimson and gold-covered coffin was carried up the steps into St. Peter's, following a line of torches. Adding the final touch of brilliance were the plumes of the Pope's own guards, their helmets and halberds glittering in the floodlights. After the lying in state, the Pope was buried on Monday of this week in a service closed to the general public. A special section covering the life and death of Pope Pius XII will be found on pages 101-105. Pictures of the procession in Rome are on pages 86-87.

Postage—Inland, 4d.; Canada, 1½d.; Elsewhere Abroad, 4½d.

CLOSING DAY OF THE CONSERVATIVE PARTY CONFERENCE AT BLACKPOOL: The Prime Minister and his wife wave in acknowledgment of the tremendous ovation. Standing on the left of the platform are, Lord Mills, Sir David Eccles, Mr. Heathcoat Amory, Mr. Selwyn Lloyd and Mr. R. A. Butler. (Further pictures on page 109.)

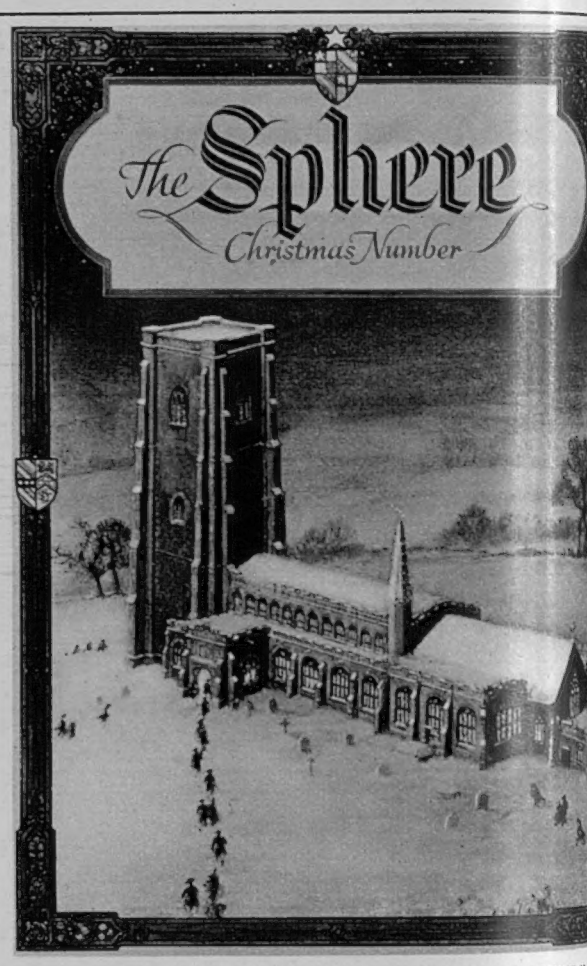
A London Newsletter

195-198, STRAND, W.C.2.

Pope Pius XII.—His Holiness Pope Pius XII died at his summer palace in the early hours of October 9 at the ripe age of eighty-two in the presence of his sister and nephews. Before the doctors and specialists had quite abandoned hope, all the available Cardinals were assembling in the antechamber and large crowds waited long hours outside in the precincts of Castel Gandolfo, many kneeling in prayer; all who maintained the vigil listened to a non-stop bulletin—commentary from the Vatican Radio. So must sovereigns, who linger on their death-beds, expect to die. So died King George V. Pius XII was born in Rome on March 2, 1876, of the noble family of Pacelli and was named Eugenio. He was ordained priest in 1899 at the age of twenty-three and rose rapidly in reputation, not least for his work in the codification of Canon Law under Pius X. Eighteen years later he was elected Archbishop of Sardes at the age of forty-one. Twelve years later again he became a Cardinal and was elected and crowned Pope in 1939 at the age of sixty-three. In his career he had been Nuncio in Germany, a post which gave him first-hand knowledge of the dangers to religion in National Socialism, and for the nine years before his election as Pope he had been Secretary of State at the Vatican. He had found time to write a large number of learned books. I am not qualified to speak of his encyclicals and directives which combined the extremes of modernity and ancient tradition. He will go down in history as a great Pontiff in times of exceptional danger and revolution. A much-travelled prelate, a fine linguist and possessed of long experience in diplomacy and politics, he became the most accessible of Popes, giving audience to a wider circle than any of his predecessors. Before the middle of his pontificate, he enormously increased the Sacred College, nominating thirty-two new Cardinals to complete the establishment drawn from all corners of the Catholic world and largely decreasing the Italian representation. With outstanding graces of mind and person, he threw himself into the work of relieving suffering and striving for peace and if he died before the dawn which he believed would come, his life's work is a testimony to his faith and service to his flock and to the world.

"Le Roi Est Mort."—The demise of a Pope and the election of his successor always concentrates a great share of the Christian and civilised world's attention on the Vatican and on Rome. The full establishment of the Sacred College consists of six Cardinal Bishops, fifty Cardinal Priests and fourteen Cardinal Deacons. These are the Pontiff's advisers and form the Supreme Senate of the Church. In the election of a new Pope, they form conclave and in complete seclusion elect by secret ballot, and only a two-thirds majority plus one is acceptable. Only then is the chosen candidate asked if he will accept election and by what name he wishes to be known. Sometimes the Papal Election requires repeated efforts to reach the necessary majority, and, though the election is in seclusion, lobbying may play a long and important part in the result, both before and during the stages of election. The British Commonwealth's interest in the proceedings is by no means numerically insignificant. It possesses probably upward of 20,000,000 Roman Catholics out of a world population of 400,000,000. But the chance of the election of a Commonwealth Pontiff is naturally remote. The full establishment of the College is not maintained to-day, the Italians now numbering only eighteen out of fifty-five, and perhaps the choice of a successor is more open than ever before, though the chosen Camerlengo, Masella, is an Italian, fourth of the Cardinal Bishops, now five in number and four of them Italians.

Bishop Bell.—Christendom has suffered another great loss by the death of Bishop Bell, so soon after his retirement. The news was received with universal sorrow, nowhere more so than in the Chichester diocese, where he laboured for over twenty-five years. Longer and more official biographies speak of his great organising abilities as Dean of Canterbury and as Bishop of Chichester, to his right to be numbered among the greatest English bishops in modern times, above all, to his moral courage which perhaps cost him the Primacy, after Temple. His convictions and strength of character often compelled him to voice and support unpopular views and minority causes, embarrassing to the "Establishment," and enlarged his see to global proportions and established his reputation internationally. In his diocese, men and women and children regarded him as a true shepherd and friend to all his flock. His kindliness, sympathy, simplicity and humility charmed all who met him, and despite his innumerable outside interventions, he had few rivals among bishops in his knowledge of his clergy and of conditions and difficulties in the parishes of his far-flung diocese. My own happiest memories of Bishop Bell come from confirmations and family weddings. No Prelate in his addresses to the young, no great man in his contacts with children, more perfectly adapted his mind and speech to their understanding or more beautifully revealed his own qualities of sympathy and simplicity. He and Mrs. Bell, a full partner in all his activities, radiated kindness, goodness and a sense of humour wherever they went; and, reflecting on him



THE CHRISTMAS NUMBER OF "THE SPHERE"

The central feature of the Christmas Number is again a spl reproduction in full colour of an oil painting by Mont Dawson, this year of a deck scene on a clipper on Christmas Alan Villiers writes the accompanying article, "Christmas U Racing Sail." The front cover, reproduced above, is M Watt's painting of Lavenham Church, in Suffolk, and he has painted the frontispiece, which shows the interior of the ch on Christmas Day. There are twenty pages in colour, inclu new illustrations to Perrault's fairy stories, by Berkeley Sutc Pittoni's wonderful eighteenth-century altar-piece, recently acqu by the National Gallery; a colour photograph of the Auto d scene in this year's spectacular production of *Don Carlos* at Co Garden; and a charming study of a boy by Verkolye. In bl and-white are a short story by Barry Perowne, an article W. Macqueen-Pope, a selection of sketches by Randolph Calde and many other fine illustrations.

It is not too early to order copies for your friends overseas we will watch the mails so that copies will arrive by Christ THE SPHERE Christmas Number will be published in the on November 14, *and may be ordered* now *from your newsag price* 4*s., postage* 6*d. extra, or direct (with remittance) from Publishers, Ingram House,* 195-198, *Strand, London, W.C.2, will send an attractive greeting card giving your name as the do*

IN NEXT WEEK'S ISSUE

THE MOTOR SHOW

A review of the Exhibition at Earls Court

and on her in deepest sympathy), I see further proof of a fact which all biographers of bishops and other public men should take more note of than sometimes they do. Political and religious controversies soon become dust and ashes. Sympathy, kindliness, simplicity, humility and humour are everlasting flowers in human memory by which even the most eminent men are best and freshly remembered. Bishop Bell, in his great biography of Archbishop Davidson, realised that truth, and I hope *his* biographer will do the same, not forgetting that he was a poet and consistently encouraged the fine arts as an influence in religion.

Unemployment and the Price of Petrol.—The unemployment figures in Britain had reached up towards the 500,000 mark by mid-September and can no longer be dismissed as trivial, local or seasonal. For though local and seasonal causes account for some of it, including a new batch of school-leaving wage-earners, and though vigorous action is promised in the hardest-hit areas, the figure is unlikely to fall throughout the winter unless further stimulus to increased production comes by Government action or by unforeseen world conditions. This figure of unemployment is as large as in 1947, the year of the fuel crisis, and there seems to be general agreement that the price and availability of petrol are closely related to full employment; and there are many persuasive arguments being put forward that now is the time for a "massive" reduction in the tax on petrol. Many of the doubts and problems which made an autumn Budget a probability have been solved or reduced in magnitude, and it is suggested that the Government need do no more in that line when Parliament resumes business than to anticipate the Budget of 1959 by immediately reducing that tax by anything up to a shilling and removing petrol from further consideration for relief in next year's Budget. To what extent such a relief would mitigate unemployment this winter I do not know, but it might well receive a very wide measure of endorsement, and I even doubt whether, following Scarborough promises of "cars for all," the Opposition would exercise its usual duty to oppose it, even if it did not wholly accept the argument that petrol relief is the swiftest and surest means of reducing both living costs and unemployment. While wage rates in vital industries go steadily upward on hopes of justification by harder work and economies, Labour spokesmen seem quite prepared to back tax reductions in general as an aid to both cheaper living and full employment.

"To Transform British Society."—Mr. Bevan did his part in the effort to close the ranks in the Socialist Party, to put across with greater assurance, unity and conviction the broad policy and intentions of the next Labour Government in office. Looking back on Scarborough, with its final sincere and united applause for their chosen leader, Mr. Gaitskell, we can see that Mr. Bevan's interventions acknowledged the urgent need for these more vigorous and united efforts and greatly assisted in the harmonious result. In doing so, he clearly compromised, *ad hoc* and *pro tem.*, with his deepest, private convictions. At Scarborough he had seen two *à outrance* resolutions heavily or barely rejected, solely on the ground that, if passed, they would damage the chance of victory at the next General Election. Land nationalisation and abolition of the fee-paying schools, if accepted as a part of the current programme, would at this time alienate a large section of the uncommitted electorate. They were shelved. Yet these two items are a vital part of Mr. Bevan's dream to "transform British society"; and at a *Tribune* meeting following Scarborough, he showed his heart and mind and hand. His dedicated dream is to "transform British society," and he believed that a Labour majority would be dust and ashes unless it proceeded to do that by every means in its power, and rejected any compromise which buttressed the "Establishment." What is that "Establishment"?

Definition of the "Establishment"?—Most of us must feel that in the post-war years the business of "transforming British society" has been very fully done; and if the "Establishment" has any meaning, it lies in surface differences of opinion as to the use and utility of a few trivial frills. To my mind, the only surviving frills which disguise the naked form of the post-war transformation of society amount to little more than to our quaint and obstinate addiction, almost unique among the nations to-day, to hereditary and other titles and a plethora of honours, the yardstick of merit or even "socialite" news-value remaining the possession of titles of some sort. There is no doubt, in my mind, that Mr. Bevan's notion of the "Establishment" would include the public schools, the landowners, and, indeed, the Court, in so far that the Conservatives' obstinate adherence to hereditary titles largely derives from a sense of "loyalty" to the Sovereign's prerogatives, and the fear lest somehow the Monarchy would be "weakened" if it remained the only survivor of the hereditary principle. Right-Wing Socialist Ministers *in office* have certainly admitted in practice the absurdity of creating new baronets in particular, but, as we see, are sensitive to criticism of party patronage in the matter of honours and rewards. That said, one might think that any attempt by out-and-out Socialism to "transform British society" must fairly and logically in the first stages be retrograde. Who are the aristocrats of our society to-day? Not the landlords of surviving broad acres, practising a pathetic showmanship to save something from the wreck; not the old school-tie boys, who figure in Socialist Governments in large numbers, if their Ministries are not so magnificently recruited from the old nobility. If the Trades Unions do not represent the aristocracy of to-day in power and privilege, one cannot suggest any rival unless the bureaucracy; and justice seems to demand that the first stage in egalitarianism must be to relieve the new "untouchables"—the new middle-cut and small fixed-income groups, ground to powder between the millstones of the demands of these two groups of aristocrats. It remains to take note of the fact that, while loyalty to its leader and closed ranks are essential requirements to Socialism on the eve of a General Election, Mr. Bevan is still a mighty force in the party, and a significant majority of that party think along his lines on many aspects of an all-out policy of Socialism. Accordingly, we may be sure that if the electorate should bring the Socialists to power in 1959, the motions rejected at Scarborough as electoral suicide pacts would return as lively issues in the first five-year programme of reforming society.

Roads and Public Services.—It is natural for a man to judge of the public services afforded him with a parish-pump vision. A great expenditure of public money is to-day being poured out on our road system (and high time, too). Until next holiday season, I can only consider the progress on the roads I habitually use. In my neighbourhood, I observe the constant filching of farmland to straighten curves in many of our minor roads which were still good enough for their normal traffic, but on A.3, the Portsmouth Road, still, as when Nelson bowled down it (or Pepys), there is hardly a straight or wide two-mile stretch throughout its length, and its two now ancient by-passes could hardly be called efficient or speedy or safe. In large part A.3 remains a narrow thoroughfare of bends and bottlenecks, and I cannot help feeling that some of the money spent on the lesser roads could be more usefully employed in improving our local main artery. I read with interest the Electricity Council's advice to the area boards to pass on to consumers the benefits of bulk price-reductions made by the Central Electricity Board. The industry last year made a surplus of £16,000,000. It sounds a large figure, but is fairly small in ratio to the vast sums involved. If every area board were to "pass on to consumers" these now available benefits in full, I realise that my own bonus would be a matter of shillings in a full year. Already I am advised not to expect those shillings, and, indeed, in some areas prices to consumers are likely to rise. For my part, I would bear the loss of those shillings and pence reductions for years to come, if I might be assured of efficient light for the £50 guarantee (and extra current used) which I still must pay annually. But since I got on to the main, I have never obtained more than 40-volt lighting from my 100-volt bulbs, and I have no present hope of improvement. Troublesome as a private generating plant was, it was always twice as efficient as the public service to my house and spared me the now frequent cuts due to thunderstorms and other causes.

Blundell's School—A Chance Missed.—I don't know whether most to admire the restraint or marvel at the ignorance of *The Times* correspondent who reported the break with tradition, when no holiday was given the school when the flood-water at Tiverton last week covered the "P.B. stones," commemorating the founder, Peter Blundell. He merely stated that "a seventeenth-century tradition accorded a half-holiday to the boys whenever the stones were covered." Most journalists and editors are constantly concerned to show their own literary knowledge and to colour their news with apt references, and I confess I could not have shown that restraint and resisted the obvious quotation from Blackmore's *Lorna Doone*, which so admirably describes the discovery of the high-water mark, its reporting to Authority and the mass flight from class-rooms by the boys, at the time when John Ridd was called home by his father's murder. I turned at once to the shelf that should hold my tattered copy of *Lorna Doone* and found it gone. Some fiend in human shape had borrowed and not returned it. If in the next few days no correspondent brings that citation to the notice of *The Times*, I shall be surprised and shocked. Meanwhile, I withhold final judgment. Either that *Times* reporter was a man of signal restraint, allergic to the trite, or he, too, had mislaid his copy of *Lorna Doone*. I refuse to believe that he has never read the book.

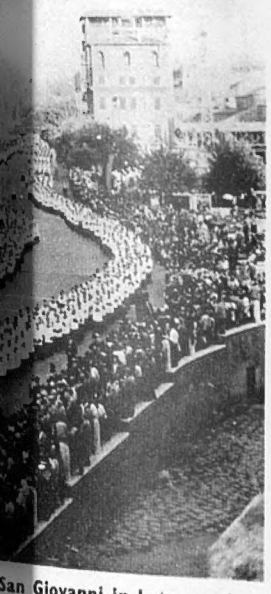
THE OLD STAGER

REQUIEM MASS AT WESTMINSTER CATHEDRAL: Dr. William Godfrey, the Archbishop of Westminster, kneels at a prie-dieu beside the high altar in Westminster Cathedral as the first of the prescribed requiems is offered for Pope Pius XII. More than 2,000 people were in the congregation, which overflowed from the nave into aisles and side chapels.

THE JOURNEY FROM CASTEL GANDOLFO TO ROME: The hearse, surm
the Colosseum. Escorting the Pope's embalmed body are car
procession passed the Colosseum, where as a young priest

WATCHED BY SILENT CROWDS: From the Colosseum looking to
possible to see the immense length of the procession. On
walls of the Basilica of Maxentius (right). The main proc

by four golden cherubs, passes in full-dress uniform. The Pacelli used often to meditate.



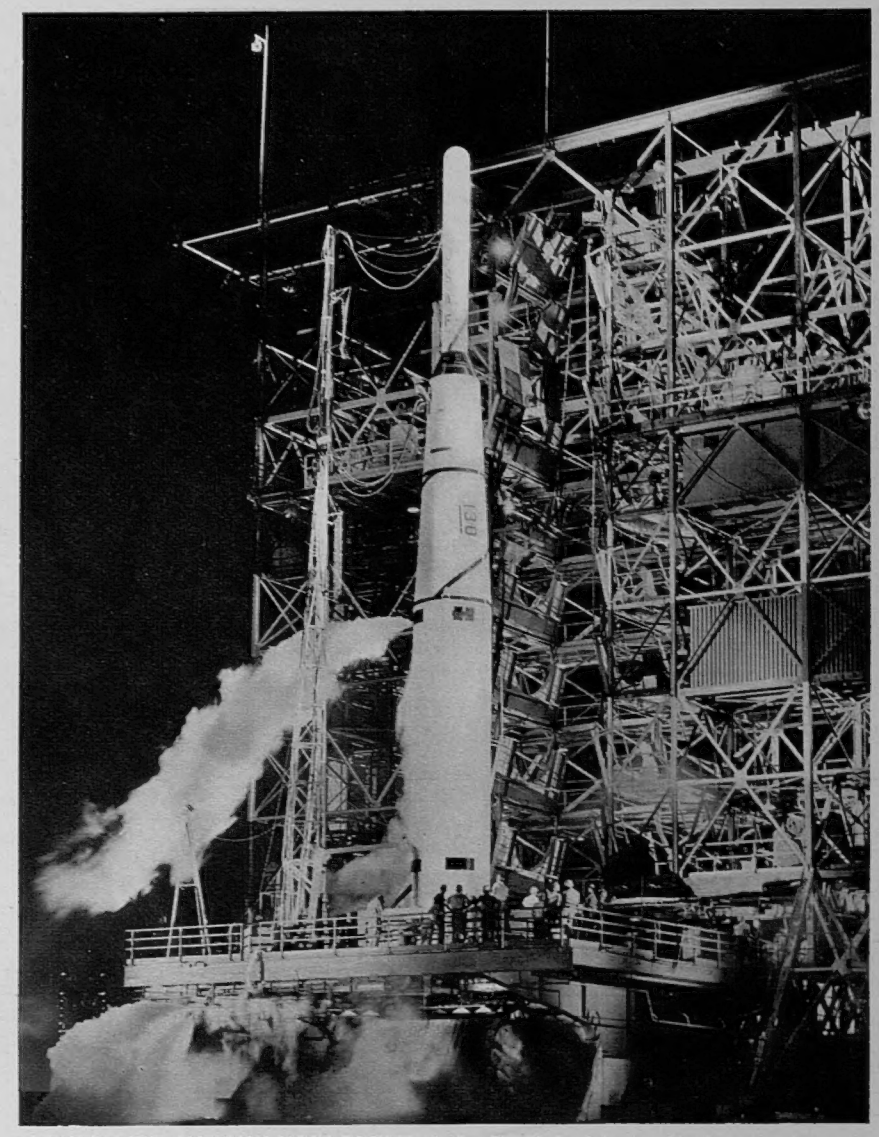
San Giovanni in Laterano it is The solemn cortege passes the stretched for about 2½ miles.

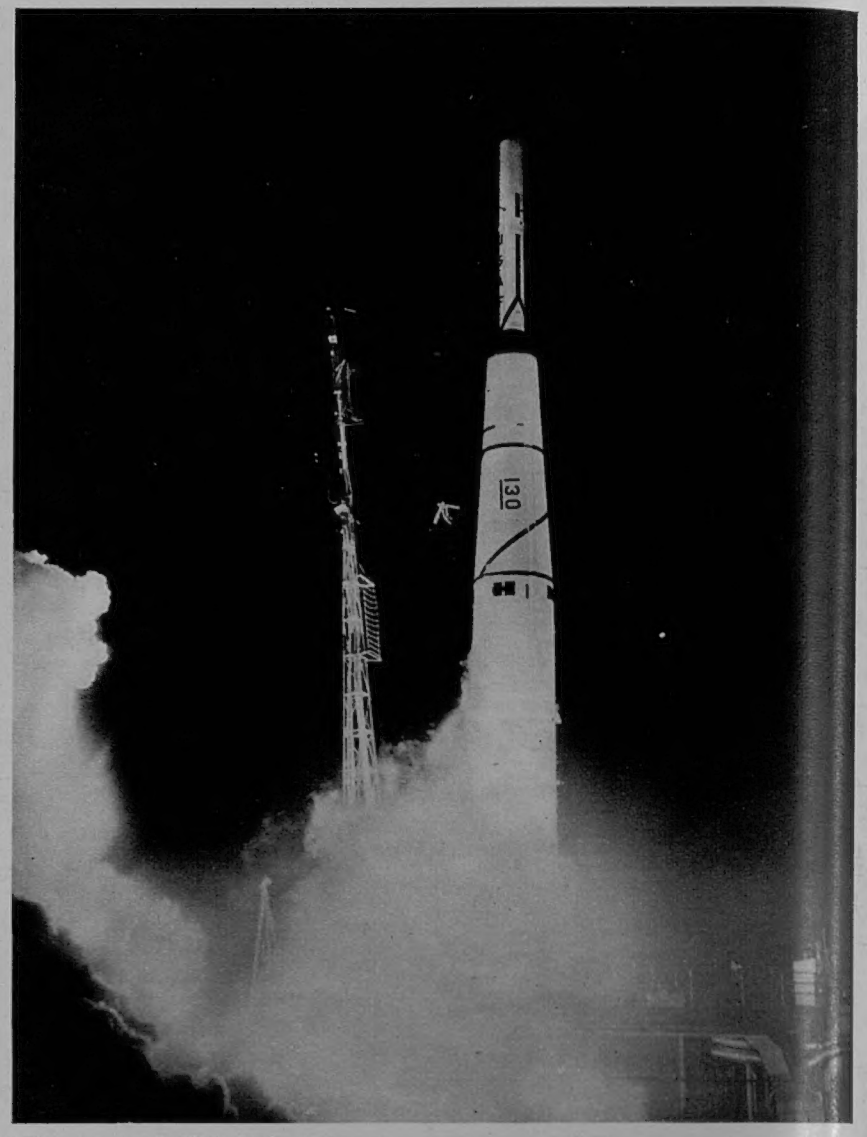
LYING IN STATE IN ST. PETER'S: Surrounded by twenty-four tall candles and attended by members of the Noble Guard and the Swiss Guard, the embalmed body of Pius XII is placed high up on the catafalque before the high altar of the Basilica of St. Peter in the Vatican City. During the nine days of mourning nine requiems were celebrated. The Pope was buried, in a service not open to the public, in the crypt of the Basilica near to the tomb of St. Peter. The body had been carried in stately procession for seventeen miles in a glass-walled hearse from the Papal summer palace at Castel Gandolfo. When the cortege entered Rome all the clergy of the city and heads of religious orders formed a great double procession. Before the hearse walked the Pope's Vice-Vicar-General for Rome, Mgr. Traglia. The cortege stopped at the Basilica of St. John Lateran, Rome's own cathedral, for the service of absolution.

ROME RENDERS HOMAGE TO PIUS XII

Immense Crowds Watch the Solemn Procession

Pass Through the Streets of Rome

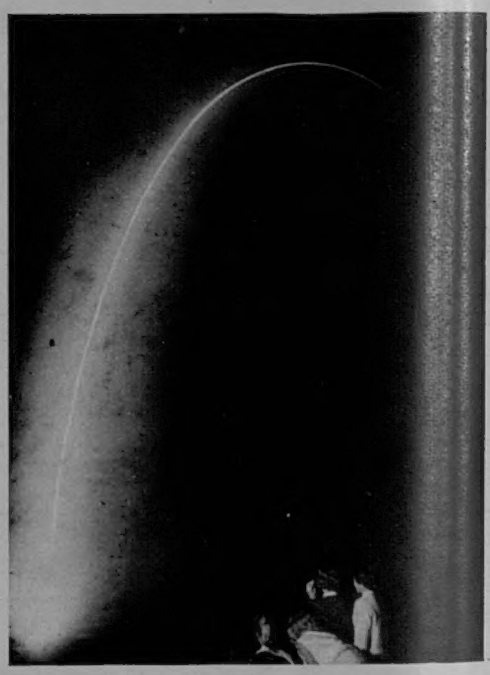




LAUNCHING THE AMERICAN MOON ROCKET: *Left*—**The United States Air Force rocket, named Pioneer, stands 88 ft. high on the launching pad at Cape Canaveral, in Florida.** *Right*—**The 52-ton rocket rises into the air leaving behind it a trail of white-hot fire. Instead of circumnavigating the moon, as it might have done if it had not ascended too steeply in the first stage of its flight, the rocket, after reaching a maximum height of 79,212 miles, began its journey back to the earth.** When it went off course, attempts were made to fire the terminal rocket in an effort to regain direction. These were unsuccessful and the rocket was expected to re-enter the earth's atmosphere last Tuesday and burn up. The Pioneer's booster first stage was a Thor intermediate-range ballistic missile. Joined to the top of it were the modified second- and third-stage components of the Vanguard rocket. The fourth stage contained the instruments which relayed information to the earth. Eight Vernier rockets were mounted round the base of the final stage. These were fired by remote control to give a final adjustment to the velocity and were afterwards jettisoned.

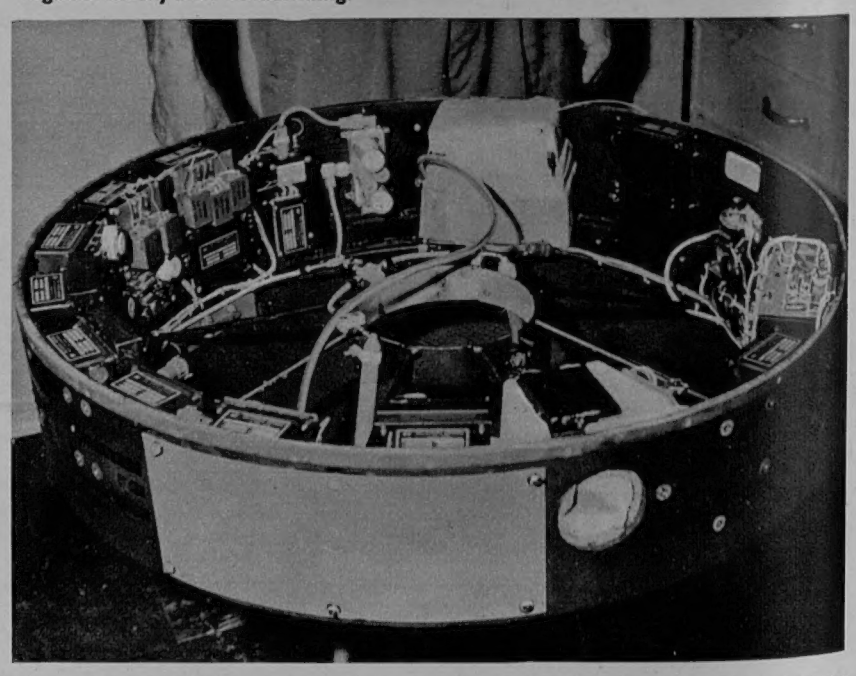
TOWARDS THE MOON . . . AND BACK AGAIN

A Second Unsuccessful Attempt in America to Fire a Rocket to the Moon



On right—

TRACKED BY TIME EXPOSURE: A thirty-second time exposure with a Speed Graphic camera obtained this shot of the rocket arcing against the sky after its launching.



ASSEMBLING THE PAYLOAD: *Left*—**Workmen attach the small Vernier rockets round the base of the final stage of the rocket.** *Right*—**Instruments inside their 29-in.-diameter container are arranged round the edge for greater stability as the top-shaped container was spinning round in flight to ensure that the retro-rocket pointed forward. Most of the small holes round the container's rim are for the photo-electric cells which would have obtained the first crude television pictures of the back of the moon.**

THE NEWS IN PICTURES

MARTIAL LAW PROCLAIMED IN PAKISTAN: In Karachi soldiers stand on guard in front of the closed gates of the President's residence. Before the President, Major-General Iskander Mirza, proclaimed a state of martial law in the country, the gates had always stood open. After a Cabinet crisis recently, the President dissolved the Central and Provincial Governments, and all political parties. The constitution was abrogated. He appointed General Ayub Khan, C.-in-C. of the Pakistan Army, chief martial law administrator. Special military courts and summary military courts were announced to deal with those contravening the regulations. Strikes or agitation in educational establishments and public utility works and installations were forbidden. Looting, hoarding of food grain and smuggling of all kinds were declared to be punishable by death under the new regulations. In Delhi, Mr. Nehru said the Indian Government would continue to deal with the *de facto* Pakistan Government.

ON GUARD IN KARACHI: A steel-helmeted soldier stands outside the American Embassy following the announcement of martial law in Pakistan.

On left—
THE MEETING OF THE WORLD BANK AND THE INTERNATIONAL MONETARY FUND IN NEW DELHI: At a banquet given by the Indian Finance Minister, Mr. M. R. Desai, at the Presidential Palace are, from left to right, Mr. R. B. Anderson, Secretary of the U.S. Treasury and leader of the American delegation; Mr. K. A. Gbedemah, Finance Minister of Ghana; Mr. Heathcoat Amory, the British Chancellor of the Exchequer; Herr Ludwig Erhard, the West German Finance Minister; Mr. Desai; Mr. R. L. Garner, President of the International Finance Corporation; and U Kyaw Min, Burmese Minister for Finance and Revenue.

A BRITISH SCIENTIST HONOURED: Sir John Cockcroft (right) holds the Nils Bohr Gold Medal which was presented to him by King Frederik of Denmark. On the left is the Danish atomic scientist, Professor Nils Bohr. The ceremony was held last week in the Danish Civil Engineers' Association building in Copenhagen. Sir John Cockcroft, who is the Director of the British Atomic Energy Research Establishment at Harwell, was presented with the medal for his outstanding scientific achievements in the field of peaceful uses of atomic energy.

WINE-TASTING IN LONDON: *Left*—The Lord Mayor, Sir Denis Truscott (right), and Mr. Guy Prince, Chairman of J. L. P. Lebègue and Co. Ltd., examine a wine during the annual tasting of French wines in the company's cellars under London Bridge. *Right*—A general view of the impressive scene inside the candlelit cellars where, as usual, the specimens of wine were grouped in districts and vintages and displayed in rows on long tables. There were 189 specimens for tasting and they ranged from vins ordinaires to the finest wines of Burgundy. Each year, the Lebègue Wine Week is attended by hundreds of guests including distinguished connoisseurs and members of the wine trade.

THE NEWS IN PICTURES

SIR WINSTON CHURCHILL AT THE THEATRE: He is seen sitting in a seat in the stalls at the Connaught Theatre, Worthing, where his daughter, Sarah Churchill, was playing the leading role in Terence Rattigan's latest play, *Variation on a Theme*. When Sir Winston entered the auditorium, accompanied by Lady Churchill, the audience gave him a rousing welcome and sang the chorus "For He's a Jolly Good Fellow."

THE M.C.C. TEAM ON ITS WAY TO AUSTRALIA: Peter May, the Captain of the team (centre), has difficulty in deciding whether to drink beer or milk from a coconut, during a luncheon given in Colombo, Ceylon. On the left is Jim Laker and on the right Sir John Kotelawala, the host for the team. He is a former President of Ceylon. Because of heavy rain the two one-day matches between the M.C.C. team and local teams had to be abandoned.

AT THE WORLD AMATEUR GOLF TEAM CHAMPIONSHIP IN SCOTLAND: Bobby Jones (centre foreground), the famous American golfer, signs the Burgess Roll during a ceremony in which he was given the freedom of St. Andrews by Provost R. Leonard. He was present at the championships played for the "Eisenhower Trophy" at St. Andrews. The final round ended in a tie between Australia and the U.S., and there was a play-off.

AMATEUR GOLFERS THRILL THE CROWDS: From the edge of the seventeenth green on the Old Course at St. Andrews, in Scotland, a large crowd watches one of the matches in the third round of the world amateur golf team championship. The championship resulted in a tie between Australia and the United States with 918 strokes each. At the play-off Australia beat America. Altogether, twenty-nine countries took part.

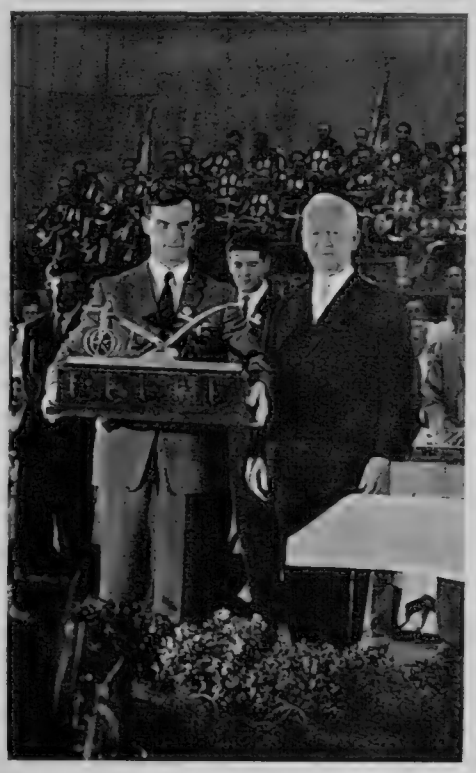
PICKETS SCUFFLE ON THE SOUTH BANK: Police bring under control a crowd of demonstrators at an entrance to the site of the new Shell headquarters on the South Bank when work on the foundations started again. The pickets were demanding the reinstatement of 1,250 workers laid off with the approval of their unions twelve days previously. The contractors, Sir Robert McAlpine and Sons Ltd., had taken this step because of an "irresponsible minority of the labour force."

THE UNITED STATES AMBASSADOR IN NORTHERN IRELAND: Accompanied by Alderman Sir William Neill, a former Lord Mayor, Mr. John Hay Whitney pauses before entering the City Hall to look at the American Forces Commemoration Stone. It takes the form of a column bearing an inscription and badges of the United States Army, Marine Corps and Navy.

THE NEWS IN PICTURES

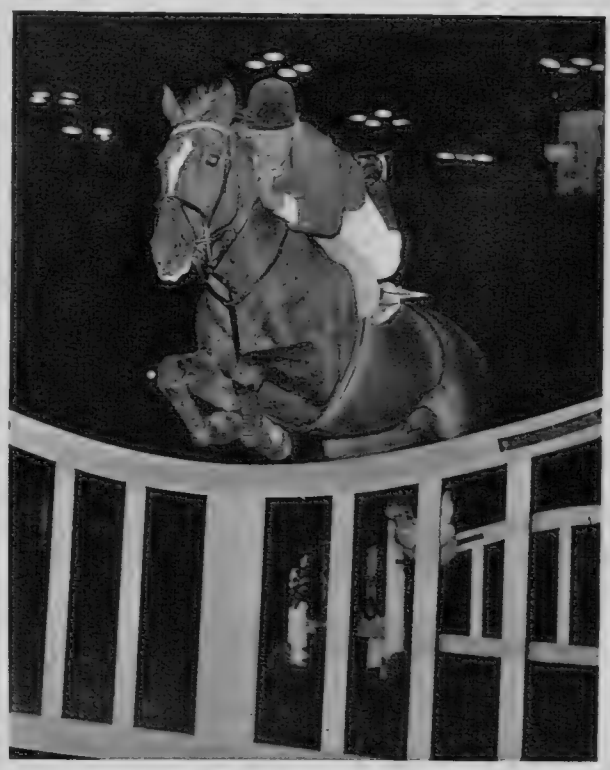
THE PRIME MINISTER IN GERMANY: Dr. Adenauer, the West German Federal Chancellor, looks momentarily perplexed as he walks with Mr. Macmillan after greeting him in Bonn. Mr. Macmillan had flown to Germany for a twenty-four-hour visit during which time he had a number of informal talks with West German leaders. Before the opening talks, it was emphasised that no special problems existed between the two countries. The intention was to exchange views on current international problems. These included the Far East crisis, the Middle East and the European Free Trade Area. Not many details on the topics discussed were made public, but it was announced that there was complete agreement between Dr. Adenauer and Mr. Macmillan on the need for the speedy introduction of the European Free Trade Area.

NEW ZEALAND RECEPTION IN LONDON: At a reception given by Mr. G. R. Laking, the Acting High Commissioner for New Zealand, for Mr. A. H. Nordmeyer, the New Zealand Minister of Finance, are, from the left—Mr. Laking, Mr. Nordmeyer, Sir David Eccles, President of the Board of Trade, Mr. Mohammed Ikramullah, the High Commissioner for Pakistan, and Mr. Alport, Parliamentary Under-Secretary to the Commonwealth Relations Office.



On right—

CHAMPION PLOUGHMAN: Mr. [illegible] Goodwin, of Dorstone, Hereford, holds the golden plough after being named winner of the world ploughing championships at Flensburg, West Germany. On the right is Herr Luebke, West German Agriculture Minister, who made the presentation. British ploughmen also won second and third places.



On left—

AT THE HORSE OF THE YEAR SHOW: Mr. Ted Edgar, riding Jane Summers, clears a gate to win the Dick Turpin Stakes. There was an unprecedented result to the Leading Show Jumper of the Year Competition when Mr. Edgar, riding the same horse, and Miss Pat Smythe, riding Mr. Pollard, won a joint victory by jumping three clear rounds each. Altogether, sixteen horses contested the final over a course which had assumed formidable dimensions. This year's Horse of the Year Show, the tenth, marked the end of an era in the history of the championship show. It was the last to be staged at Harringay Arena, which has been sold. Future meetings will have to be held elsewhere. Since the first show entries have more than doubled, from 372 to 866 this year.

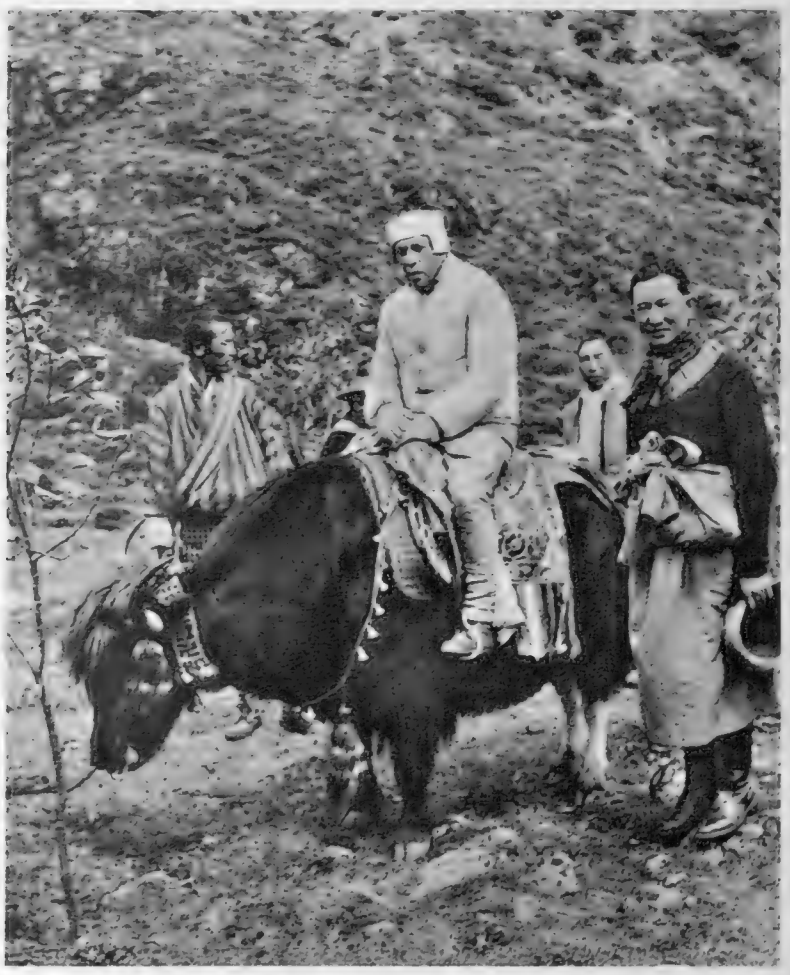
THE OPENING OF THE DANISH PARLIAMENT: King Frederik (right) speaks during the ceremony. Facing him on the left are Queen Ingrid and Princess Margrethe. The latter is heir to the throne and was present for the first time. Beyond her are Conservative members of the Danish Parliament. Last week Hr. Hansen, the Prime Minister, underwent an operation. Hr. Krag, who had been Minister of Foreign Trade, took over the post of Foreign Minister, previously also held by Hr. Hansen.

A WINE FESTIVAL IN ITALY: In the main square of the small town of Marino, about 18 miles south of Rome, a huge wine flask is placed on the water fountain. Police keep a narrow space round the base clear for young men filling wine glasses from taps in the big, decorated barrel. These are distributed among the assembled crowds This ceremony, and dancing and other festivities, are part of the yearly wine festival celebrated with great enthusiasm in the town on the first Sunday in October.

THE NEWS IN PICTURES

U.S. TROOPS LEAVE THE LEBANON: American soldiers embark on the U.S. transport ship *General Leroy Eltinge* (right) in Beirut Harbour. On the extreme left is the U.S.S. *Taconic*, the headquarters of Admiral James Holloway, commander of the American Forces in Lebanon. Some 1,000 troops left to take up their stations in Germany, leaving about 5,900 American soldiers in the country. Reports also said that there were additionally some 1,800 marines in Beirut for what was officially described as "liberty purposes." It was thought these men might be used ultimately to cover the final phases of the American withdrawal.

OPPOSITION TO THE GOVERNMENT IN BEIRUT: A Lebanese Army tank bursts through a road-block as troops disperse crowds on the Damascus road in Beirut. It was reported that Falangists, pro-Chamoun opponents of the present Government, were placing road-blocks in many parts of the city in attempts to prolong a general strike they had ordered. Opposition to the Government of Rashid Karami strengthened last week. The Socialist Nationalist Party issued an invitation to form a "front for popular salvation." This had the object of setting up a new coalition Government.



MR. NEHRU'S VISIT TO BHUTAN: The Indian Premier, wrapped up in warm clothing and wearing ear-muffs as a protection against the cold, rides a yak during his seventeen-day tour through the remote country adjoining Tibet, in the eastern Himalayas. On his return to Delhi, Mr. Nehru, tanned by sun and wind, was not prevented by a sore throat and a cold, contracted in Gangtok, from describing with enthusiasm the inaccessible and beautiful country he had visited. Asked about Tibet, he said that reports he had received indicated conditions were not fully normal. He said that India had made no formal offer to help develop Bhutan and that the Maharaja did not appear to wish for it. Mr. Nehru expressed the hope that road communications would be established between Bhutan and India. It was thought that events in Tibet, prompted by Chinese "progress," had led the Maharaja of Bhutan to believe that his country's seclusion could not be maintained indefinitely.

THE SEAL OF STATE FOR THE NEW FRENCH CONSTITUTION: M. Michel Debré, the Minister of Justice, turns the press to emboss the new Great Seal of State for the Fifth Republic. Hopes were high in Paris last week for the success of the new Constitution. On the whole, opinion in the capital approved the Government decision in favour of the single-member constituency system, with two ballots where the first does not produce an absolute majority. In Algeria, the Public Safety Committee chose to interpret General de Gaulle's speech at Constantine as meaning full integration. It was thought this interpretation was publicised chiefly as a means of maintaining pressure on General de Gaulle.

On left—
A SUBMARINE HANDED OVER TO THE ISRAELI NAVY: In the conning tower of the British submarine *Springer*, now renamed *Tanin* (*Crocodile*) stand the former British commander and the new Israeli captain during the ceremony at Gosport. Built in 1945, *Springer* was sold for £200,000.

World Affairs

The Pattern of Political Terrorism

By JOHN CONNELL

TERROR as a political weapon has a long history. In the protracted and world-wide catastrophe, popularly applauded as the liquidation of colonialism, its use is now dismally familiar. Although its operations have long since broadened out from the simple technique of assassinating political or military prisoners, it must be admitted that the shooting down of two unarmed women, out shopping in the middle of the day, is a novel and repulsive tactic. However, it follows the cold, fanatical logic of terrorism, and it must be regarded as an extension of terrorism's moral and tactical doctrine, not as an outrageous and unique break-away.

The purpose of terrorism is to hurt and frighten the established authority—with whom those who use it conceive themselves to be in conflict—so much that that authority quits, in physical and moral rout. It is an ancillary, a branch of armed rebellion; armed rebels who succeed take the honourable title of liberators; those who fail are apt to be described by their conquerors as terrorist gangsters, and after they have been executed their names become a legend and a myth.

Terrorism deserves, but seldom receives, a measure of objective study. The emotions which create it, on which it is nurtured and comes into action, are violent; even when the immediate aim has been attained and the concentrating impetus of terrorism no longer, therefore, exists, these emotions, diffuse and brooding, are apt to linger on in popular folk-lore. Terrorist activity must be planned and prepared in secrecy; it is of its essence conspiratorial; it keeps as few records and files as possible. If its orders are transmitted by word of mouth, so is its history fashioned—by those who are under a deep compulsion to justify themselves and their deeds.

Who, for instance, can ever discover the real truth about the murder of Michael Collins in an ambush on a country road in County Cork? Certainly not his most recent English biographer. Collins's death, like the larger part of his work and career, is wrapped in secrecy; and the atmosphere of grim mystery, of the unexplained and the inexplicable, is essential to the legend. Yet Ireland has provided the text-book, the main and most faithfully studied and imitated examples, of terrorist technique these many years past. There has not been a terrorist movement in the last thirty-five years that does not owe a great deal to Sinn Fein and the I.R.A. The present I.R.A. campaign in and against Northern Ireland is an attempt to re-create the myth and to sustain it in contemporary conditions.

The pattern of terrorist evolution can be analysed. A nationalist movement comes into being in a country which is under the rule of others, which by treaty, purchase or other legal and long-accepted means, is part of an imperial system. This rule may be, and often is, long-established and popular; it has invited and obtained the co-operation, in the day-to-day tasks of political life and administration, of a considerable part of the population. The nationalist movement develops within this framework; it is at first entirely peaceful and "constitutional," and its ends are respectable and limited. Differences begin to arise with the ruling Power, not about the principle of the transference of authority, but about the speed and the extent to which that transference is practically possible; there are minorities to be considered, ancient and important liberties to be guaranteed.

The liberal, constitutional reformers share, to a noticeable degree, the outlook and sentiments of their rulers, and have reached social and cultural sympathy with them. There arises a faction whose members are unaffected by this sympathy, to whom the ruling Power is alien and hateful; they have no desire to co-operate with their rulers, whose posture of benevolence is to them a fraud. They do not believe in the gradual, constitutional evolution of self-governing democracies and the peaceful transference of power; they want to defeat and oust their rulers as violently and as rapidly as possible.

Their first and in some ways their most bitter arguments are with their fellow-countrymen. It is in an early phase of terrorist evolution that the hearts of the constitutionalist reformers have to be broken, and their authority ruthlessly stripped from them. No humiliation can be too brutal for a John Redmond, no punishment too unforgiving, when he and his ideas stand in the way. Ferocious dialectical controversy is a preliminary to murder; you can crush your fellow-countryman in debate and manipulate the voting on the committee, so that he stumbles from the room aged and shamed by the icy, biting conviction of your argument. But senior officials in the Secretariat and His Excellency himself, whether in Government House or in the Executive Council, are of tougher stuff and cannot be dealt with in this fashion. They have power, and there is, in the terrorist's opinion, only one way to get it from them. To him theirs is not government by consent, but by fear; and by fear they are to be driven out.

Inevitably those who carry a political enterprise to this extreme are a minority in their own country. If its system of government is on the whole efficient, tolerant and enlightened, it takes time, and a succession of crises, for terror to become an acceptable political weapon. Tension has to be created, and the sense of injustice, deceit and oppression. Hatred has to replace trust, respect and affection. Modern means of mass-communication, pressure and propaganda from outside can nowadays hasten this disagreeable process; even so, there has to be a considerable degree of moral deterioration before the ties of old, spontaneous loyalties are irreparably broken.

THE FUNERAL OF A VICTIM OF A BRUTAL TERRORIST ATTACK: Heavily veiled, eighteen-year-old Margaret Cutliffe stands beside the grave of her mother during the burial service at the British Military Cemetery in Nicosia, Cyprus. Beside her is her father, Sergeant D. Cutliffe, and her fiancé, Sergeant R. Baynes, is on the left. Mrs. Cutliffe was shot in the back as she fled from terrorists in Famagusta. Her daughter wore a heavy veil not only to hide her grief, but also to conceal her identity. Out shopping with her mother, she was the only witness of the murder.

The Irish were conscious of real wrongs inflicted upon them throughout centuries, the collective racial memory of which was strong and stubborn. These wrongs explain, though they do not excuse, Irish terrorism, from the Phœnix Park murders onwards. They do not excuse the attempt to coerce Ulster, and the fury with which that attempt was pressed home. There was civil war in Ireland from 1919 onwards, and it became civil war of a vicious and brutal and merciless character. For many nationalist movements elsewhere Sinn Fein set the pattern of violent terrorism; Sinn Fein demonstrated that the British, if you murdered enough of them, and of their servants, in as cruel and cold-blooded a fashion as possible, would abandon their strongholds on such terms as they could get, even if it meant betraying their friends and loyal supporters. Sinn Fein showed that the British were vulnerable enemies, that—as with the "auxiliaries"—they could hit back without restraint and without discretion and be portrayed as brutal and tyrannical for doing so, and that, if you chose to shoot men in their bedrooms in front of their wives, they could be shamed as well as defeated.

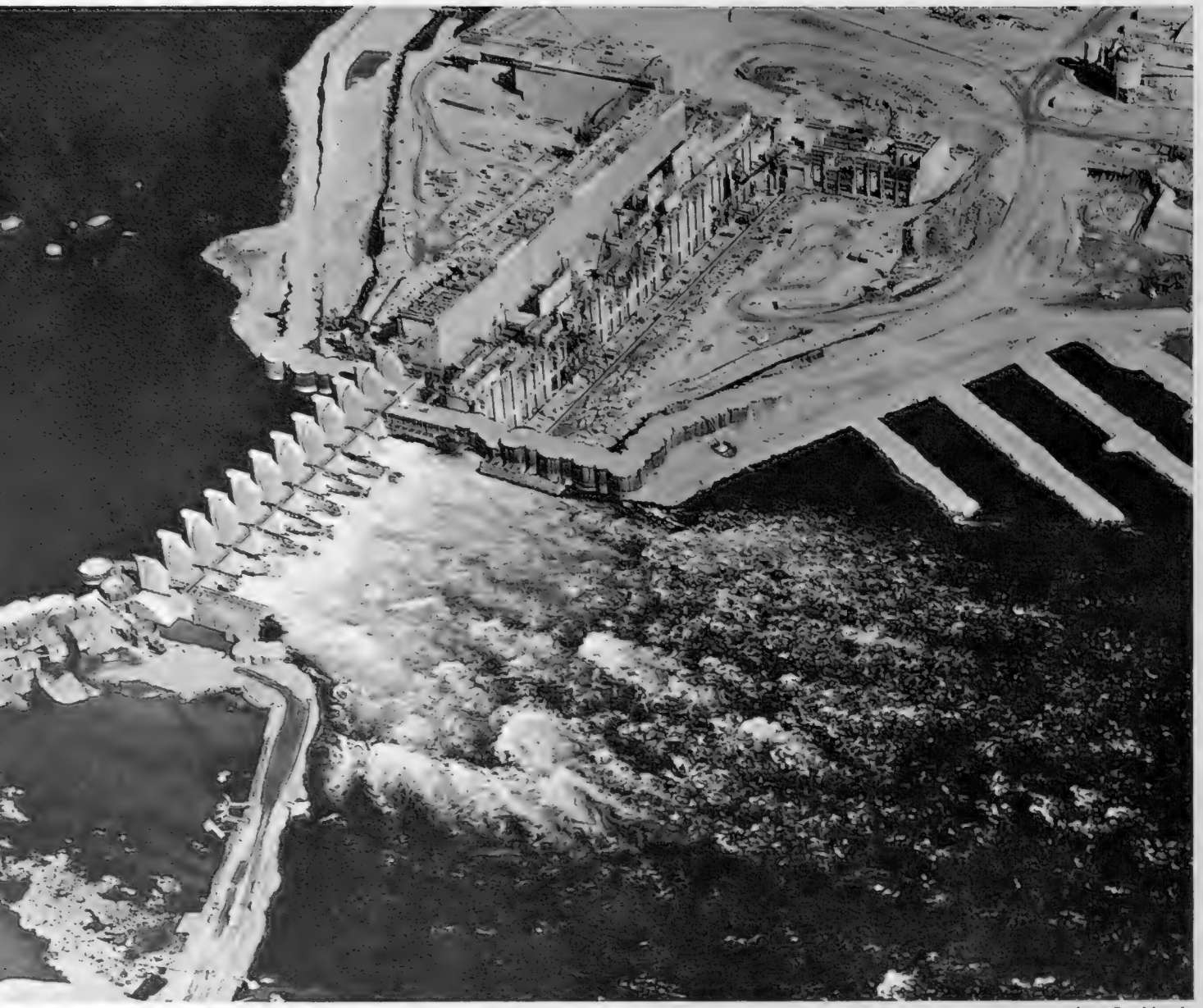
These were lessons which others took to heart. But Ireland's experience also demonstrated that if terrorism gets the upper hand, if law and order (even if they are the alien oppressor's law and order) are totally disregarded over a period of years, the task of establishing and maintaining, after the oppressor has gone, a civilised society, in which ordinary folk can go about their business unafraid, is made considerably more difficult. Thirty-seven years have passed, and the Eire authorities have not yet brought the last gunman under control.

In India it was one of Gandhi's more remarkable achievements—and more poignant since he himself died, like Michael Collins, at the hand of an assassin—that in large measure he (and not Nehru and not Patel) had defeated terrorism before, and not after, the transfer of power. The end of the Raj had some hideous accompaniments, but at least the succession authorities were not terrorists, and it is to the credit of the last British and their Indian colleagues, military and civilian, that there was an administrative apparatus to hand over in some sort of order. The British departure from Palestine had no such compensating factor. Terrorism was practised by Irgun and the Stern Gang; it exacted its toll of lives and it had its grim effects. The British left administrative chaos behind them; and the Israelis, who were engaged in repelling the attacks of five Arab armies, had also to combat their own internal danger. They were not immediately successful, and the murder of Count Bernadotte, the U.N. mediator, made their moral dilemma tragically clear to them. They dealt with it more effectively and more single-mindedly than the Irish did.

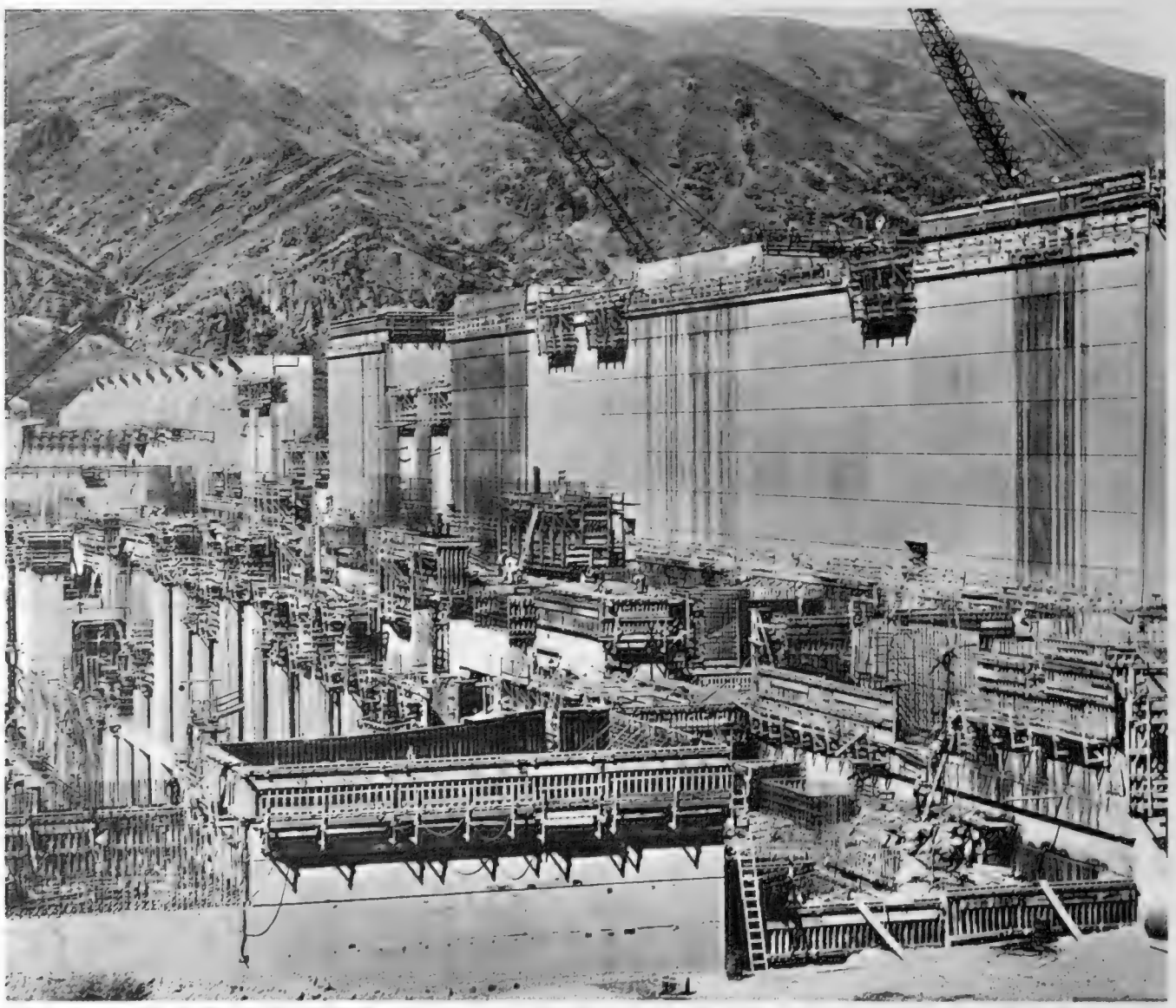
But the last months of British rule in Palestine indicated with grim clarity the development of terrorist technique and doctrine. The Second World War had intervened, and almost every nation in Europe which had fallen under Nazi control had evolved vigorous national resistance movements; henceforth terrorists in rebellion against "colonialism" were able to cite these as respectable and praiseworthy precedents. The analogy was and is, of course, utterly false. British rule in Palestine, Kenya, Malaya and now Cyprus, and French rule in Algeria, are not in either origin or execution in the slightest degree similar to the Nazi invasion and enslavement of France or Holland or Norway. To accept the analogy, as too many left-wing commentators in Britain and elsewhere are eager to do, is to concede to terrorism as an instrument of insurgent nationalism a moral status which it does not merit.

Cyprus offers perhaps the clearest and fullest case-history of terrorism in action that there has been in recent times. Four years ago Cyprus's political problems were relatively simple and soluble. Now they are tragically and hideously complicated. As in other countries which were under British rule, a heritage of minor blunders and omissions has built up into a calamitous crisis. Bitter hatred has been engendered where affection—even if misplaced and misunderstood—existed before. Laurence Durrell says that, when the conflict began to tauten and one of the first EOKA youths who was captured was executed, "the mythopœic image of the Englishman which every Greek carried in his heart, and which was composed of so many fused and overlapping pictures—the poet, the lord, the quixotic and fearless defender of right, the just and freedom-loving Englishman—the image was at last thrown down and dashed into a thousand pieces, never again to be reassembled."

This was and is sadly true; but so, alas, is the converse. Greco-British friendship was not one-sided. Many, many an Englishman has his mythopœic image of Hellas and the Hellenes, which he, too, carries in his heart—confused and overlapping pictures, the result of wartime experience, of a vaguely remembered classical education, of scraps of poetry and song—and this image has been thrown down and dashed into a thousand pieces. That affection's loss and that welling-up of grief are part of terrorism's toll, and in the end not the most negligible part.



HARNESSING THE WATERS OF THE COLUMBIA RIVER: The power-house, dam and spillway begin to take shape at Priest Rapids, in the State of Washington, U.S.A., near the confluence of the Snake and Columbia Rivers. Ten 114,000 h.p. water turbines, ten generators and other equipment have been ordered for this American hydro-electric project from the English Electric Company.



CONTRASTS IN THE STATE OF WASHINGTON: The steel and concrete structure lies below the rugged hills rising from the Columbia River at a point downstream from McNary Dam. The power-house is one of a chain of stations being built to develop the power of the river. The Priest Rapids project by itself when it is finished will have cost 92,000,000 dollars (£33,000,000).

FAR WEST POWER PROJECT

British Participation in an American Hydro-Electric Scheme

The Columbia or Oregon River in course through the State of W ington, in the north-west corner of United States, is now being harnesse a large scale hydro-electric scheme chain of dams and power-houses is b constructed and one of the stations Priest Rapids. The site is downstr from the Grand Coulee, Chief Joseph Rock Island dams and upstream McNary dam and immediately above confluence of the Columbia River the Snake River, one of its prin tributaries.

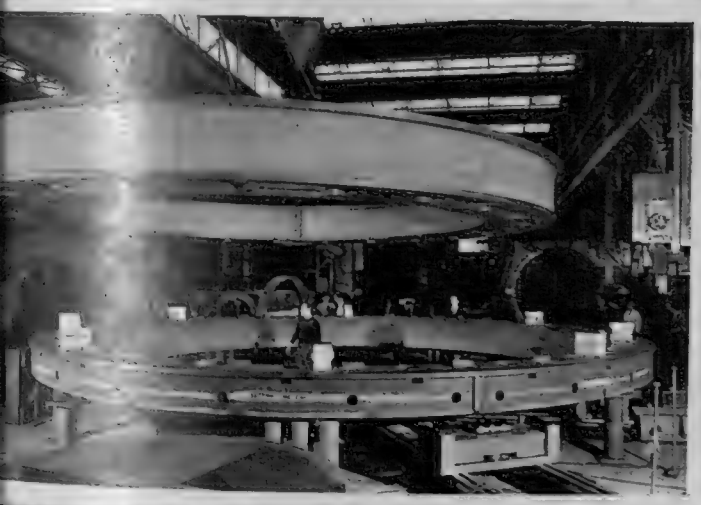
The contract of 92,000,000 d (about £33,000,000) has been awa by Grant County Public Utility Di No.2, of Ephrata, Washington Sta the Merritt-Chapman and Scott Cor tion, of New York. It is believed the biggest "turnkey" contract o type ever signed in the United State "turnkey" is a comprehensive co given to one firm which makes arrangements for all the work on the A British company, the English El Trading and Export Co., has sub tracts of 30,000,000 dollars (£10,70 for the machinery.

Ten 114,000 h.p. water turbine generators and five transformers a order. Each of the generators wil an outpit of 83,000 kilovolt ampe 85·7 revolutions per minute. The be linked in pairs to a step-up transf and from each of these transformer output will be 183,000 kVA. C will be transmitted to various cons centres.

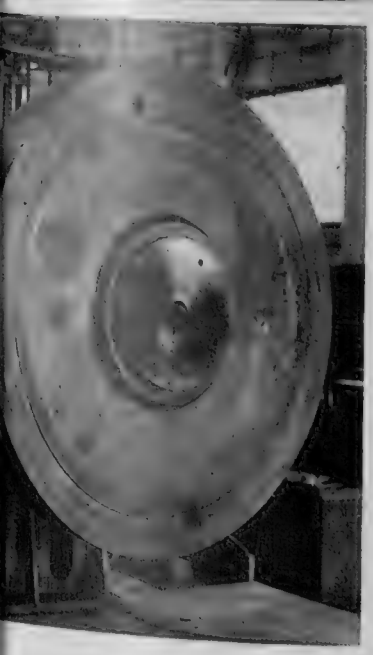
The work of manufacturing the ous components is in hand at the E Electric's plant at Netherton, near L pool, in Lancashire. Many of th quired parts are huge in size and output is keeping pace with the con tion of the project in the far we America. Equipment which is r for the foundations of the power-ho some of it has to be bedded in concre has already reached Priest Rapids. sections of the turbines, generator transformers are on their way across Atlantic and there is no likelihood o supply falling behind the demand the building programme.

When the hydro-electric stati finished below the rugged hills round Columbia River, it will be yet ano of the examples of British engine craftsmanship which are to be foun so many parts of the world, and wide variety of climates.

LANCASHIRE SKILL FOR THE FAR WEST OF AMERICA: In the heavy fabrication shop of the English Electric Company at Netherton, in Lancashire, many of the components of the machinery for Priest Rapids are now being constructed. The company's contract is worth some £10,700,000.



READY FOR BORING: The vast circular outer head cover and bottom ring of the No. 1 water turbine is set up for boring in one of the workshops of English Electric.



On left—

LABELLED FOR DESTINATION: An engineer affixes a label "Main shaft Priest Rapids U.S.A." on this monster tubular part for a turbine.

On right—

THE GENERATOR WINDING SHOP: Segments of the stators for the generators are being wound. Some equipment has already been shipped from Nertherton and the remainder is being sent to Priest Rapids when required by the engineers on the site.

THE FOX LEADS A DOG'S LIFE

In a Land which Affords it no Legal Protection, the Fox Manages to Flourish, Particularly in Suburban Areas

By BRIAN VESEY-FITZGERALD

"THERE is nothing in the whole animal creation quite so lithe, so supple, so active and yet so strong for his size as the fox. A fox in good condition is the very epitome of fine quality. The colour and texture of his coat, the perfect symmetry of his limbs, his brush with its long white tag, his black velvet ears and grey throat all combine to place him quite at the top of the class." Thus wrote Lord Willoughby de Broke in his *The Passing Years*.

You may not wholly agree with him. I do not. I am in agreement with St. George Mivart, a famous zoologist of the last century, who described the cat as the most perfect animal, the acme of muscular perfection and the supreme example in the animal kingdom of the co-ordination of mind and muscle. I do not think that there can be any doubt about that. But we see this wonderful co-ordination demonstrated every day, and many times a day. We have seen it so often that we have long since ceased to wonder at it, have become so accustomed to it that we no longer even consciously notice it. We just take it for granted : it is the cat.

We are not so familiar with the fox. Even Lord Willoughby de Broke, though he spent the greater part of his life in the ardent pursuit of them, was not so familiar with the fox. Although he was an enthusiastic and exceptionally skilful killer of foxes, he had a great affection for the fox—none but a lover could have written the passage quoted above—and, I suspect, no particular affection for cats. His love of the fox (the affection which the hunter holds for the hunted is quite illogical, but it is none the less very real) led him to give it a position very much higher in the class than that to which it is strictly entitled.

All the same, the fox is a wonderful animal. In a heavily over-populated country, in which virtually every man's hand is against him, the fox not only manages to survive, but to flourish. This, when you come to think of it, is a very considerable achievement. Legally the fox is afforded no sort of protection in Britain. This applies equally to all British wild animals, although not, of course, to wild birds or to fish: not one of them is afforded any sort of legal protection at all. (The Game Laws, which are in any case often contradictory, are designed not for the protection of the animals mentioned in them, but for the protection of the owners or occupiers on whose land they may be found.) There is no sort of legal ban on the killing of foxes, badgers, deer, otters, hares and the rest at any time during the year. This lack of legal protection, even during the breeding season, reflects, you may think, little credit on a "nation of animal-lovers."

The simple truth of the matter is that only hunting affords some measure of protection to some of these animals in that it is the sporting custom not to pursue them during the breeding season. It is true that this does not amount to much, since comparatively few people hunt, but it is at least something. Yet there are many people who would welcome the abolition of all forms of hunting without bothering about the institution of a "close season." It would surely be wiser to insist on the establishment of legal close seasons first: that is, if the welfare of the animals is the prime consideration.

I suppose that most people would regard the fox-hunter as the chief enemy of the fox. But this is certainly not so. The figures speak for themselves. I do not know exactly how many packs of foxhounds there are in Great Britain, but the number is in excess of 200 anyway. That is a lot of packs of foxhounds for a small country. If they were really efficient you would expect (for fox-hunting has been going on for a very long time) the numbers of foxes to be affected severely by now. Throughout the country practically every Master at practically every Farmers' Luncheon practically every season maintains that his pack has, that very season, killed a record number of foxes: it is very difficult, indeed impossible, to obtain accurate figures. But it would probably not be far from the truth to say that no pack, no matter how efficient, kills more than one-sixth of the foxes it finds during a season. The fox has increased greatly in numbers throughout the country in recent years.

This must not be taken as a measure of the inefficiency of the fox-hunt. It is a measure of the disappearance of the fox's most deadly and persistent enemy: the gamekeeper. Many more foxes were killed annually, by shot, trap and poison, in the heyday of the gamekeeper than were ever killed by foxhounds. The gamekeeper has now virtually disappeared from large areas of the countryside, and the fox, which was never a rare animal, has benefited enormously. It is the diminishing number of gamekeepers, rather than the inefficiency of the hunt, that has really helped the fox. This, and two other, little realised, factors: the great increase in the number of motor-cars and the steady spread of housing development. The former helps the hunted fox in many ways, but especially by masking scent: the latter provides sanctuaries where the fox may live pretty well free from persecution.

I live in such an area myself: on the outskirts of a town which is growing with almost unbelievable rapidity. When I came here, in the '30's, the village was an entity, distinct from the neighbouring town, and all around was open country, well farmed, well wooded, and with large estates. In those days the sight of a fox was rare. There were foxes. One heard reports of poultry being taken every now and again. But the country was well-keepered and one would only catch an occasional glimpse of a hunted fox.

Now the town has absorbed the village and spread beyond it. Open country has been pushed back at least a couple of miles, much of the woodland has disappeared, all the large estates have been broken up, and I do not think that there is a full-time gamekeeper in the immediate vicinity. Where once were farm fields and woodlands there are now many houses with comparatively large gardens, half an acre to a couple of acres or so. Foxes abound. It is a common thing to hear the screams of the vixens at "clicketting" time (the mating season), and in the winter months the triple bark of the dogs is a nightly occurrence. Two of my friends have fox earths actually in their gardens, and neither would dream of disturbing them.

Unfortunately, I have not got that sort of a garden. But I often get foxes in my garden. One night in late January, I heard a vixen scream close by and then listened to two dog foxes bickering—it was not an actual fight—almost beneath my bedroom window. This was in a completely built-up area. There must be very few days in the year when I do not find fresh fox-droppings in the garden. They come to drink from my fish-pond. I have twice watched a fox doing so, since the pond is no more than 15 yards from the drawing-room window, and I suspect that they have been responsible for the removal of all my Golden Orfe, which are surface-swimming fish.

Until fairly recently I have only seen foxes in my garden in the early morning, always between 4.30 and 5.30. This is what one would expect, since the fox is generally considered to be strictly nocturnal in habit. I confess that I have always wondered about this, for the fox's eyes are cat-like, the pupil narrowing vertically in a bright light, and I cannot see the point of an eye like that if the animal is never in a bright light.

One of my friends has often seen a fox cross his lawn in the full light of day and recently one dog-fox has taken to appearing in my garden at all sorts of odd hours. I think that it is not so much a liking for darkness as fear of man and all his works that has made the fox a nocturnal animal under normal conditions. But the conditions of the sort of rural suburb in which I now live are far from normal. There is no hunt and no one here shoots foxes, because hardly anybody has got a gun, and nobody puts down poison because there are so many pet cats and dogs about. As a result the fox is gradually gaining in confidence. I think that no fox (as far as I know) has been in my garden in daylight until recently, because until recently I had a terrier. This terrier was elderly and had long since given up all interest in active pursuits, but no doubt his scent was sufficient to warn off the foxes. He had to be put down a little while ago, and it is since then that the fox has taken to coming into the garden whenever he feels inclined.

I can add nothing to what is already known of the habits of foxes. But I do think that the widespread belief that foxes kill and eat cats is exaggerated. I have never heard of anybody who has actually seen a fox kill a cat, by the way. At any rate, my own cat has been in the garden at the same time as this fox, and he did not show the least sign of perturbation. He did get under a bush, but that was all. I watched him through field-glasses and he did not even look surprised, much less frightened.

I also think that the eyesight of foxes has been exaggerated. This one at least seems to have what we would regard as poor sight. He certainly does not recognise a human being at 50 yards provided that the human does not move. Perhaps in a poor light, when the pupils are open to a greater extent, the sight is better, although I should be prepared to doubt that. At least, I do not think that that is the case with the cat. But the fox's hearing and his powers of scent, although the latter are pretty well impossible to determine with any accuracy, are astonishing.

So far, whenever I have attempted to go into the garden when he is there, he has made off at once. But he takes no notice of people within the house. You can open an upstairs window and he remains unmoved: open the garden door or a downstairs window and he has gone.

He does not come every day: I wish he did. For I have taken to talking to him out of the window. I cannot say that he takes the slightest notice, but, on the other hand, he does not bolt and he certainly hears me. No one could call him tame (he is every whit as distrustful as a stray cat and nothing like as tame), and I am not so foolish as to suppose that he ever will be. But one day, perhaps, I shall be able to open the door and he will not bolt at once.

A WARY HUNTER : With its ears pricked, a young fox peers from the long grass in which it is almost hidden from attack. Foxes differ from dogs in the shapes of their skulls and in the fact that the pupils of their eyes are elliptical rather than circular. They are frequently seen in daylight, particularly in semi-built-up areas.

Training Russia's Rocket Dogs

Various Stages in the Preparation of the Four-legged Space-travellers

JOURNEY INTO SPACE: In Moscow two dogs rest amid technical equipment in the cabin of a rocket in readiness for their space journey. The results of these experiments with animals are providing information for the flight of human beings into space.

A FOUR-LEGGED SPACE-TRAVELLER: The dog, which appears to be asleep, is thoroughly examined by experts in the X-ray department of laboratories in Moscow. The animal had been retrieved after being sent up in a rocket. Space-dogs go through a careful training and conditioning for their work and do not appear to suffer ill-effects.

SNUG IN A SPACE-KENNEL: A helmet is fitted over the head of a dog resting in what looks like a diver's outfit. The animal is wearing a space suit and is surrounded by a mass of equipment with which contact is kept with the earth.

TESTING BEFORE AND AFTER A FLIGHT: *Left*—One of the space-travelling dogs sits on a vibration stand during altitude tests before a flight. Special equipment is harnessed to the front of the animal. *Right*—Another of the dogs looks inquisitively at the expert reading a multi-channel oscillograph which registers breathing and blood pressure. The animal had just returned to earth from its second journey in a rocket.

On October 4, 1957, Russia successfully launched the world's first man-made satellite. A month later they fired a second into orbit. Then, early this year, came the news of the placing in orbit of America's first satellite. Since then, understandably, most of the world has been paying considerable attention to rockets, guided missiles and satellites. The first step of placing such a satellite into orbit having been achieved, the next move was to consider the possibility of sending up a rocket carrying life.

For obvious reasons, a human being could not be fired into space. The choice fell, somewhat naturally, on animals. In this venture Russia again took the lead. Her second satellite had, in fact, contained a dog, Laika, the now immortal space-dog. She was harnessed to instruments from which reports of her health and condition were wirelessed down by code, but when the oxygen generating plant in the satellite ceased to function, Laika died. Since then, a number of Soviet dogs are understood to have been sent up in rockets and to have returned to earth by parachute.

The pictures on this page, recently received in London, show some of the stages in the training of space-dogs. Diagnostic devices, including oscillographs and X-ray apparatus, are used by the scientists. These record all the changes that take place in a dog's breathing, pulse and blood pressure during flight. The animals are trained to withstand all the changes which they have to endure, as well as to keep calm during the vibration of the rockets.

The recovery of a dog from a satellite has yet to be achieved. A description of the method by which a dog in a satellite might be recovered was published in THE SPHERE last year. The attempt would most probably be made when the satellite had descended to its lowest point in the orbit. The first requirement would be to separate the satellite from its carrier rocket and then reduce its orbital speed, so that gravity reasserts its influence and causes the satellite to fall towards the earth. This could be achieved by firing rockets to act as brakes.

Next, some form of air brake would be needed to slow the rate of descent still further. This might take the form of a fan-tail of hinged blades which opens from the back of the satellite. As the satellite began to reach denser levels of the atmosphere, the hinged blades would gradually close to prevent too rapid deceleration. The danger-point, where maximum heating occurs, would be between 50 and 70 miles, the height at which meteorites burn up due to friction with the air. As protection a laminated plastic material on the nose of the satellite would be allowed to heat up and burn away, leaving the structural shell to penetrate the atmosphere. Finally, a ribbon-type parachute would be released to reduce the speed still further and to effect a smooth landing for the passenger.

MOMENT OF HISTORY

B.O.A.C's Comet 4's Inaugurate the New Age of Jet Airliners

By a short head, B.O.A.C. flew the first commercial jet service across the Atlantic. It was a triumphant return for the Comet, the gleaming symbol of British aviation and surely one of the most beautiful of aircraft ever made. After ten years of rigorous testing, the Comet 4 is possibly the most thoroughly proved airliner ever to go into service. After the tragedies in 1954, the airframe was subjected to a most radical re-appraisal, an event almost unique in engineering history in its long-term thoroughness. It was because of this that the Comet could be placed so quickly and so efficiently into regular service. It was a triumph for the makers, de Havillands, and for B.O.A.C., and a triumph for the Comet itself to herald the new age of turbo-jet travel. Journeys by jet aircraft will become quicker, more comfortable and, it is hoped, quieter.

By a coincidence of dates, the history of the Comet 4 and its immediate rival, the Boeing 707 ordered by Pan American, which was due into regular transatlantic service on October 27, runs parallel. Both received their certifications of airworthiness late in September. The prototypes, Comet 3 and Boeing 367-80, flew for the first time in July of 1954. The latter aircraft in its present versions and in its later, longer-range versions, was designed after the Comet. It is expected that the first Boeing 707-320, the intercontinental version, will be delivered to Pan American in 1959. Both versions have a cruising speed in the range of 600 m.p.h. and will be able to carry up to 120 passengers.

On right—

ARRIVAL IN NEW YORK : The crowd at Idlewild Airport looks at the shining white-and-silver Comet 4, *Delta Charlie*, which has just arrived after its inaugural flight from London for B.O.A.C. The passenger ramp is being moved into position at the tail-end of the fuselage. In the background is a Boeing 707 jet airliner of Pan American Airways, B.O.A.C.'s rival for a turbo-jet trans-atlantic service. It has also just landed, after a proving flight. Left is the tailplane of a Super Star airliner of Lufthansa, the West German airline.

Unfortunately for Pan American, the problems of noise on take-off and the length of runway needed are bedevilling the full use of these aircraft.

These problems, in general, form the background to the new jet age. The Comet 4, designed for shorter-stage lengths than the Atlantic crossing, has an impressive performance in take-off and landing, and is an exception. In this connection it is interesting to note that the next British contender for Atlantic crossings is likely to be the VC.10, designed by Vickers Armstrong and ordered by B.O.A.C. for delivery in 1963. It was announced earlier this year that this aircraft which has an entirely new design, its four jets being grouped near the tail, will not have an appreciably higher speed than the Boeing 707. But it is likely to utilise the power of its Rolls-Royce Conway engines to improve take-off performance. Thus it will be able to use the short, high-temperature runways on the Empire routes.

The new jet airliner age was inaugurated in a spirit of competition, and a spirit of fierce rivalry is likely to typify the next few years. Besides Boeing 707's, there will be the Douglas DC-8's, a family of domestic and intercontinental jet airliners of impressive size and performance. These aircraft are hoped to be in service at the end of next year. Figures mentioned include 140 tourist-class passengers, a maximum cruising speed of around 580 m.p.h. and a range for the intercontinental version of from 4,000 to 5,000 miles.

NO SMOKING
ON OBSERVATION DECK

ROUND-UP OF LAST MAU MAU

Operations in the Kenya Jungle Against the Remaining Terrorists

For most people the Emergency in Kenya is over; the days of terrorism gone. As far as the average person is concerned, Mau Mau, the secret, subversive movement which set the Colony aflame with its acts of violence and murder, has been stamped out. Guns which were at one time carried day and night have been stored and normal life resumed. "Were you here during the Emergency? . . ." is a favourite conversational opening gambit.

To a large extent the Emergency is a thing of the past. Helped by the Government, the Kikuyu people, from whom the cult drew its support almost exclusively, are slowly recovering from an ill-conceived rebellion that brought nothing but harm and which set them back years in development. But for the Kenya Police, on whom the responsibility of rounding up the remnants of Mau Mau rests, there remains a formidable task. One hundred and eighteen terrorists, including four leaders, are believed to be still at large. They are a potential menace to the peace of the country.

Tracking them down is as difficult as looking for the proverbial needle in a haystack, for these men, with thousands of other terrorists since accounted for, took to the vast forests of the Aberdares and Mount Kenya when Government pressure against them increased. From there they raided lonely European farms and the villages of their own people, whom they attempted to intimidate. When supplies were cut off and defeat became a certainty, these remnants of Mau Mau retreated farther into the mountains, where to-day most of them live. Gradually, with the help of the Kikuyu people themselves, the police are bringing them in.

Former terrorists have been responsible for the capture of many of their one-time comrades. They have changed sides. These men are well-versed in forest work, and led by fearless young Europeans disguised as terrorists, they seek the Mau Mau on their own ground and beat them at their own game. The pseudo gangs continue to operate successfully. Now more members of the Kenya Police have gone into the forest on an operation which has as its main object the round-up of the remaining terrorists.

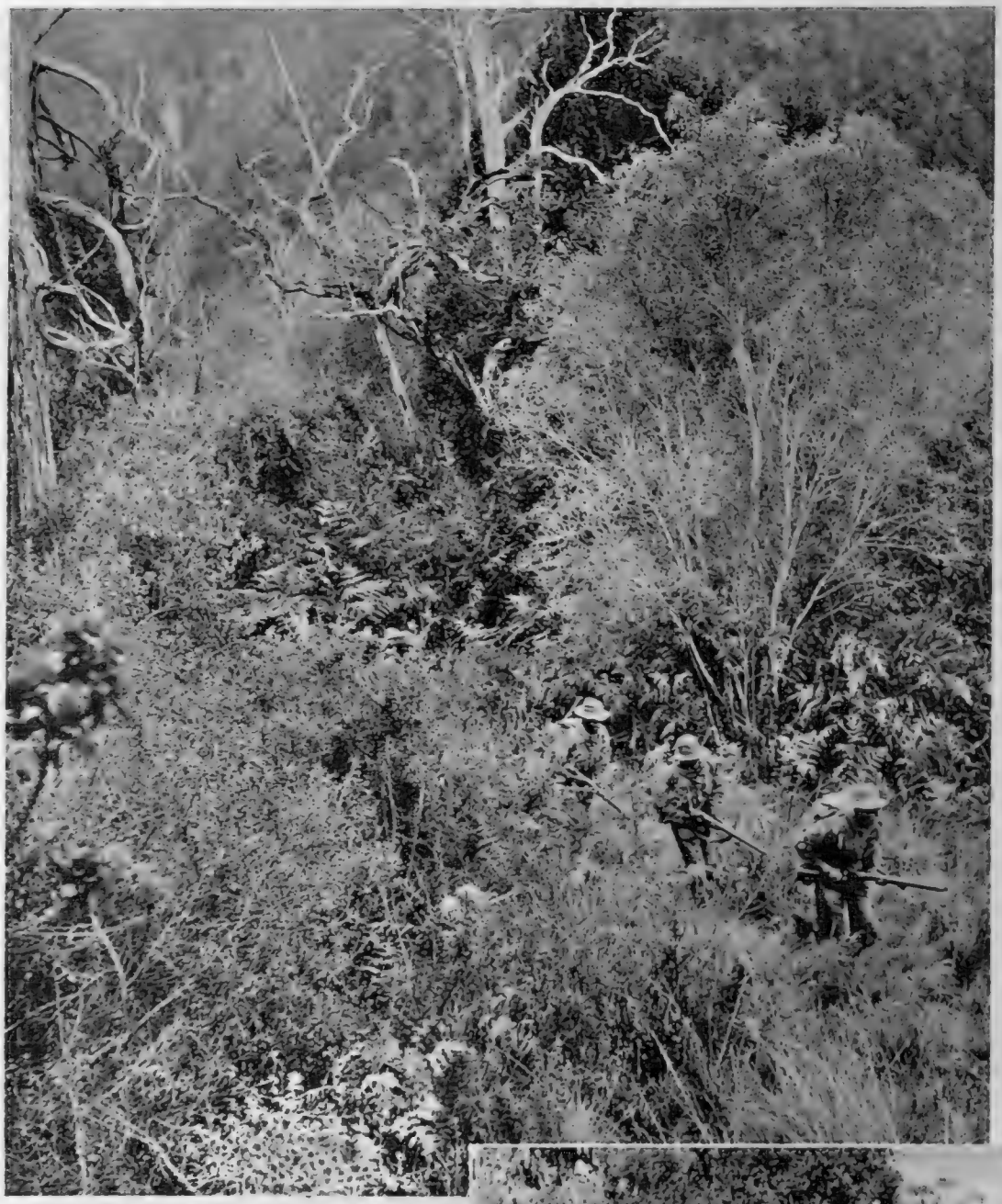
"Operation Tusker" was mounted last August. A plan was drawn up and certain sections of the Aberdare Mountains were allocated for sweeps by members of the General Service Unit. "D" Company, with its ex-Mau Mau guides, moved in. The area covers many miles, most of it thick forest seared by steep ridges and valleys. Game tracks are ill-defined and as narrow as the breadth of a man's shoulders. The operation is split into eight phases. The altitude at which the patrols work varies between 6,000 and 12,000 ft. Patrols generally last from two to three days of sweat, struggle with the undergrowth and constant alertness.

"Operation Tusker" may not be an immediate success. Forest hide-and-seek is an uneasy game, with death very often the reward of the unwary. Those taking part in it will gain experience which will bring with it eventually the ability to seek, find and capture. When one realises the casualties of the Emergency it is not surprising that the Kenya police are resolved to track down the last of the terrorists. Of the Security Forces, 63 Europeans, 3 Asians and 525 Africans were killed, while among the civilian population 32 Europeans, 26 Asians and 1,832 Africans lost their lives.

PLAN OF ACTION: Chief Inspector Moorcroft and Superintendent Thompson plan a move against the remaining Mau Mau.

AN EXPERT: Captain Folliot, M.C. (right), is leader of one of the groups which uses Mau Mau disguise to track down terrorists.

PREPARED FOR ANY EVENTUALITY: Inspector Michael Ross, who comes from Glasgow, moves with his automatic gun at the ready through a bamboo thicket. Although most people regard the emergency caused by the Mau Mau in Kenya to be finished, there are still about 120 terrorists known to be hiding in the forests of the mountain ranges. "Operation Tusker" was begun in August by the police with the purpose of rounding up the remaining Mau Mau.



On left—

DEEP IN THE FOREST: The picture, showing a patrol on the move, gives some idea of the dense undergrowth of the mountain jungle through which the anti-terrorist units have to operate. Tracking down Mau Mau is like looking for the needle in the proverbial haystack

Below—

ON PATROL: With his right arm raised Inspector Ross gives his squad orders for their next sweep in the round-up. Police in "Operation Tusker" are being assisted by members of the Kikuyu people, some of whom were at one time in Mau Mau, but have now changed sides. Such helpers are especially valuable for their knowledge of the habits of terrorists and forest lore

HOT ON THE SCENT: Standing in a stream, the trackers find signs of Mau Mau fish traps. This indicates that their quarry should not be far away. The police patrols are gaining experience which they believe will enable them eventually to bring in all the terrorists.

The Life of Pope Pius XII

Eugenio Pacelli was Pontiff of the Holy See for Nineteen Momentous Years

WHEN Pope Pius XII died on October 9, his Pontificate had covered nineteen momentous years. The Second World War broke out a few months after his assumption of the Papal throne. This was followed by the spread of the power of Communism. He was the first Pope of the Atomic Age and as such had to give authoritative utterances upon the rapid and revolutionary advance of nuclear science and the developments in many other technical fields, as well as upon the numerous conflicting moral problems of the day.

Associated for most of his career with diplomacy, he also left his mark in theology and scholarship. But to many millions outside as well as in his own church, he will probably be best remembered as the most accessible of Popes. He was always available to receive Catholic pilgrims and non-Catholic visitors from all over the world. It was a pastoral duty on which he laid great emphasis.

Eugenio Pacelli was born in Rome on March 2, 1876, into a noble family which had a long tradition of Papal service. His father, a lawyer, was Dean of the Consistorial Advocates at the Vatican and his grandfather had held a Government post under Pius IX. Rather surprisingly for a member of such a family, the young Pacelli was educated at a State school before passing into the Capranica Seminary in Rome for ordinands of noble birth.

As a young priest he first caught the eye of his superiors as a scholar, being an assistant to Cardinal Gasparri in the codification of the Canon Law ordered by Pope Pius X. The Cardinal soon recognised his abilities in other directions and employed him on missions abroad.

Father Pacelli visited London as a member of the Papal delegation for the funeral of Queen Victoria, was in England again for a Eucharistic conference in 1908 and for the Coronation of King George V three years later. In 1913 he was appointed Secretary for Extraordinary Ecclesiastical Affairs and next year he was Under-Secretary of State under his patron, Gasparri.

In 1917 he was named as Nuncio to Munich by Benedict XV and was concerned in that Pope's abortive moves to seek an end to World War I. For the next twelve years he was in diplomatic posts in Germany, being transferred as Nuncio to Berlin in 1920. He concluded concordats in Munich, Dresden and Berlin before returning to Rome to receive his Cardinal's Hat in 1929 and to succeed Gasparri as Secretary of State in the following year.

The Secretary of State is sometimes regarded as the Foreign Minister of the Holy See. Although the Pope is pledged to perpetual neutrality in respect of political disputes between Governments, the Secretary is responsible for the Vatican's diplomatic relations with other countries. Cardinal Pacelli soon became a familiar figure far outside Germany, which had known him for many years, and his own native Italy. In the middle '30's he was Papal Legate to the Eucharistic Congress in Buenos Aires and also made a tour of 8,000 miles, largely by air, through the United States. Indeed, after the Pope he was unquestionably the most powerful member of the hierarchy. His knowledge of Germany enabled him to view Nazism from its inception with distrust and to stand firmly against the neo-paganism of Hitler.

In spite of Pacelli's prominence in the world scene, few expected him to succeed to the Triple Crown on the death of Pius XI in 1939. The historically knowledgeable pointed out that no Secretary of State had ever become Pope and other pundits declared that he was too closely connected with politics to stand a chance at the Conclave. Yet Pacelli was elected on the third ballot, according to reports unanimously except for his own vote. He assumed the same Papal name as his predecessor and much significance was read into that by those claiming to be versed in Vatican affairs.

Such speculations were proved in the next two decades to be erroneous. Pius XII, while fully conscious of his inheritance as 262nd in the usual list of Roman Pontiffs, showed himself fully aware of the necessity of dealing in his own way with the many urgent problems of his reign.

Immediately upon his coronation he was faced with the complicated situation which led to the outbreak of war in September 1939. Unlike Benedict XV in 1914, whose outlook towards the approach of the First World War appears to have been dictated in some measure by national considerations, Pius XII foresaw the disaster which was coming upon the world and strove to avoid it, as far as his position would allow him. Constitutionally, he had to be neutral and could not participate in international congresses unless specifically asked to mediate by all parties to an international dispute. This did not prevent him seeking privately by all possible means at his disposal to avert the catastrophe.

But, as is seen now, events had passed beyond the stage of mediation and so, within a few months, the Supreme Pontiff, in common with the leaders of the other Christian Communions, had to suffer the pain of Christendom divided within itself. In the first year of the hostilities he used his influence in attempting to limit the war, but when Italy became a belligerent there was nothing further he could do, beyond working to ameliorate the lot of prisoners of war, refugees and the destitute.

The return of an uneasy peace to the world brought with it many problems. The chief of these was the advance of Communism. Pius XII spoke frequently and clearly against its pernicious doctrines, even though this might often mean the persecution and suffering for those of his Church in the countries being absorbed into the Kremlin's sphere of influence. The purpose of the Holy Year of 1950 was to demonstrate the forces of Roman Catholicism against Marxism, and to many who did not subscribe to the Roman Communion, it was also an inspiration.

ONE OF THE LAST PUBLIC APPEARANCES OF POPE PIUS XII : Standing on a balcony at his summer residence at Castel Gandolfo, he raises his arms in blessing on those below. On his right hand is the Fisherman's Ring, which, according to custom, was removed and broken up after the Pope's death.

Side by side with the ideological conflict, the Pope gave the most careful attention to a wide range of no less important problems. The impact of nuclear energy and automation, the worth of television and films, the significance of psychiatry—these were only a few of the matters on which he gave authoritative utterance. Often he would receive a group of experts and speak to them with a clear knowledge of their subject but expound the answers to their particular problems in a manner which laymen could understand. Some might disagree with him, but none could doubt his meaning.

In matters of doctrine and theology, the scholar who had assisted Cardinal Gasparri in the great work on Canon Law issued a number of very important encyclicals. Their general tenor revealed the mind of a liberal scholar. History, archæology, ethnology and other sciences were to be used as aids in the proper interpretation of theological and exegetical questions. He instituted liturgical reforms and in 1950 promulgated the dogma of the Assumption of the Virgin Mary.

With all the calls upon his time, the Pope never forgot the needs of ordinary men and women. He was tireless in appearances to bless the vast crowds of pilgrims who flocked to Rome and he never spared himself in the exhausting business of granting audiences to individuals. With a wide knowledge of foreign languages—he is said to have been proficient in seven—and with his considerable experience of travel, he impressed his personality on visitors from almost every part of the globe.

It is far too early to attempt to assess the place in history of Pius XII. Popes, because of their position in international society, inevitably provoke controversy among historians. None will dispute that Pius XII discharged his manifold duties with deep devotion. This perhaps was especially so in the last few years of his life when he suffered from extreme ill health. Lesser men would have bowed to the demands of a frail physique and accepted the necessity for a lighter daily routine. But the Christian spirit of Eugenio Pacelli was indomitable to the end. From first to last he was " the servant of the servants of God."

(Further pictures on the following pages)

THE POPE AS A BOY: Eugenio Pacelli, who was later to become Pope Pius XII, at the age of eleven. He was born on March 2, 1876, of a noble family from Acqua Pendente.

CARDINAL EUGENIO PACELLI: This picture was taken in 1930. The Cardinal had returned from diplomatic missions abroad and was made Secretary of State.

AT AN AMERICAN UNIVERSITY: He receives the honorary degree of Doctor of Laws at Fordham University, New York City in 1936. Kneeling is the college Presid

AFTER HIS ELECTION AS POPE: Now Pope Pius XII, robed and seated on his throne in the Sistine Chapel, he reads his first message to the world following his election in March of 1939. The message was spoken in Latin and was a strong plea for better understanding among the nations. The labours of the new Pope to avert the disasters of the Second World War have not been revealed.

On right—

THE NEW POPE: He wears his vestments for the first time after his election as he sits on the throne in the Sistine Chapel. The day of his election, March 2, coincided with the date of his birth.

THE NEWLY-CROWNED PONTIFF: Pope Pius XII wears the Triple Crown and clasps his ha in prayer after the Coronation. It had fallen to him, since he had been elected Chamberlain of the Holy Roman Church, to preside over the ceremonies of the fune and of the interregnum, after the death of Pius XI. The conclave met on his 63rd birthd

THE LIFE OF POPE PIUS XII—FROM BOYHOOD TO PAPACY

Eugenio Pacelli was one of four children. His brother Francesco followed their father into the profession of ecclesiastical law and became legal adviser to the Holy See during the Lateran Treaty negotiations in 1929. According to all accounts, the boy Eugenio early showed a sense of vocation for the Church and he was ordained priest in 1899. His aptitude for languages, law and history was of great use to him in the offices of the Congregation for Extraordinary Ecclesiastical Affairs. At the start of the First World War in 1914 he organised the exchange of unfit prisoners of war through Switzerland.

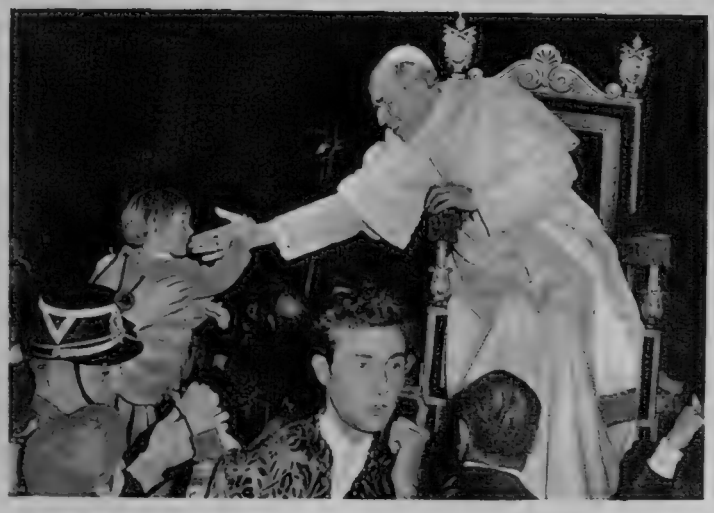
When he received his Cardinal's Hat in 1929 and soon became Secretary of State, he had over a quarter of a century's experience in diplomacy behind him. Among his early tasks as Secretary was the detailed application of the Lateran Treaty recently concluded between the Vatican and the Italian Fascist Government. Great patience was required to ensure its smooth working. In 1935 Cardinal Pacelli was appointed Cardinal Camerlengo (Chamberlain of the Holy Roman Church) and thus was in charge of the administration of the Church during the interregnum after the death of Pius XI.

The election and Coronation of Pacelli as P Pius XII was carried out in the first half of 1939. T world on the verge of war, his first Encyclical *Pontificatus* was concerned exclusively with relig matters and was probably deliberate in avoiding issues between the belligerents.

For a year the Pope worked, especially in associati with America, to keep Italy out of the hostilities. W the conflict became global, he entered into diplom relations with Japan, for the purpose of safeguarding Church's interests in the occupied islands in the Paci At the same time he opened diplomatic relations Chungking, thus making clear his intention of neutra In due course Italy itself became a battlefield. Pius

UDIENCE WITH THE : The British Minister efence, Mr. Duncan ys, stands beside the during an audience ch lasted forty tes. Mr. Sandys was ng Rome for talks the Government in 1958. Pope Pius XII known to a wider er of people than of his predecessors. as a Pope who was ome in a crowd.

IN THE PAPAL PALACES: *Above left*—The Pope raises the Host during midnight Mass in the Mathilde Chapel in the Vatican at the beginning of Christmas Day. *Above right*—He looks through a recently installed and highly powerful telescope in the observatory at the Papal palace at Castel Gandolfo. He had a taste for technical efficiency and was interested in scientific matters. Electric lifts and microphones became regularly used equipment in the Vatican.



ight—
ED BY THE VATICAN E GUARDS: The Pope from his Papal chair ress a child. It was st audience of 1953.

On right—
THE 25TH HOLY YEAR: Pius XII knocks on the Holy Door of the Basilica of St. Peter, Rome, to inaugurate the Holy Year starting on December 24, 1949. Great crowds awaited audience with him during the Holy Year.

NG THE SICK: The Pope returns to the Vatican City from his summer residence to bless 5,000 sick people from all parts of the world, assembled in the Belvedere Courtyard. Although over eighty years of age, and having suffered severe illness, the Pope never shirked his heavy programme. Ordered complete rest by his doctors, he continued to attend to urgent matters.

THE ANNIVERSARY OF HIS CORONATION: In Rome, the Pope is carried in state during the celebrations in March of this year. Despite his age, the Pope continued to advise his people on the grave issues facing the world of to-day, on the issues of nuclear warfare and on the problems of civilisation.

several appeals to the opposing powers to spare the ous monuments and treasures of his country and tely resisted attempts by the Germans when they in occupation of Rome to make him move into any.

ardinal Maglione, the Secretary of State, died in The Pope did not appoint a successor, and thus end of the war enormous labour was concentrated us XII's hands. Abroad, relations had to be re-ished with countries from which the Vatican had isolated during the hostilities and the menace of nunism had to be met inside as well as outside Italy. 1946 the College of Cardinals had grown small in ers and Pius took an unprecedented step by creating twenty-nine new members of the Sacred College. It was noticed that only five of them were Italians. In 1952 further Cardinals were created, among them Archbishop Stepinac in Yugoslavia and Archbishop Wyszynski of Warsaw. The establishment of native hierarchies in Africa, India and China brought in Cardinals from the last two countries. To-day Italians represent only a third of the College.

In his organisation of his Church, the Pope showed himself fully alive to contemporary needs. He realised, too, the worth of many modern inventions. The Vatican radio station was greatly expanded and its broadcasts were aimed at counter-balancing transmissions from non-Catholic countries as well as the incessant propaganda from the Communists. It is now claimed to be the most powerful in the world. Pope Pius took a keen interest in machines and mechanical devices and introduced several modern innovations into his apartments in the Vatican.

The Holy Year of 1950 was one of the great events of his reign. The crowds which gathered in Rome were so vast that it was almost impossible to form an accurate estimate of their size. The perpetual audiences, the attendance at services and special functions which had to be added to his normal onerous routine severely taxed his physical strength. In 1953 the Pope fell seriously ill. He recovered after long convalescence but was again gravely ill in 1954 and 1955. Nevertheless, when he could return to work he refused to spare himself

JUST BEFORE THE FATAL ILLNESS: Pope Pius XII stands beside Cardinal Spellman, Archbishop of New York. This was one of the last audiences that the Pope gave at his summer residence, Castel Gandolfo, before his death. Cardinal Spellman led a pilgrimage to Italy of 607 American priests and laymen. A few days later the Pope suffered a stroke; he had been indisposed with an attack of the hiccoughing which caused his last serious illness.

AWAITING NEWS OF THE POPE'S HEALTH: In the square in front of the Papal summer residence at Castel Gandolfo, just outside Rome, a number of people, some sitting at tables outside a café, wait for information. *On left*—Dr. Casimiri, the chief of the official Vatican newspaper, reads an early report by three of the Pope's physicians at Castel Gandolfo. His Holiness had taken ill and suffered cerebral circulatory disturbances. The churches of Rome were filled after a call to prayer had been issued. A little later a second bulletin, signed by four doctors, stated that some improvement had been noted. He was thought to have been partially paralysed by the attack, which began with a loss of sight and speech. A later stroke ended hopes of his recovery. A medical bulletin which was issued revealed that the Pope had suffered a heart attack. It was announced that at 3.52 a.m. (2.52 a.m. G.M.T.) on Thursday, October 9, Pope Pius XII had died. The announcement was made by Vatican Radio.

KNEELING IN PRAYER: In St. Peter's Square in front of the Apostolic Palace in Vatican City a group of Italian men, women and children pray for the recovery of Pius XII. Prayers were offered in all the churches in Rome. The Pope was a "Roman of Rome."

IN WESTMINSTER CATHEDRAL: During Mass, prayers are offered for the recovery of the Pope when news was received in England of his serious illness. Dr. Godfrey, Roman Catholic Archbishop of Westminster, asked for prayers to be offered at daily Mass.

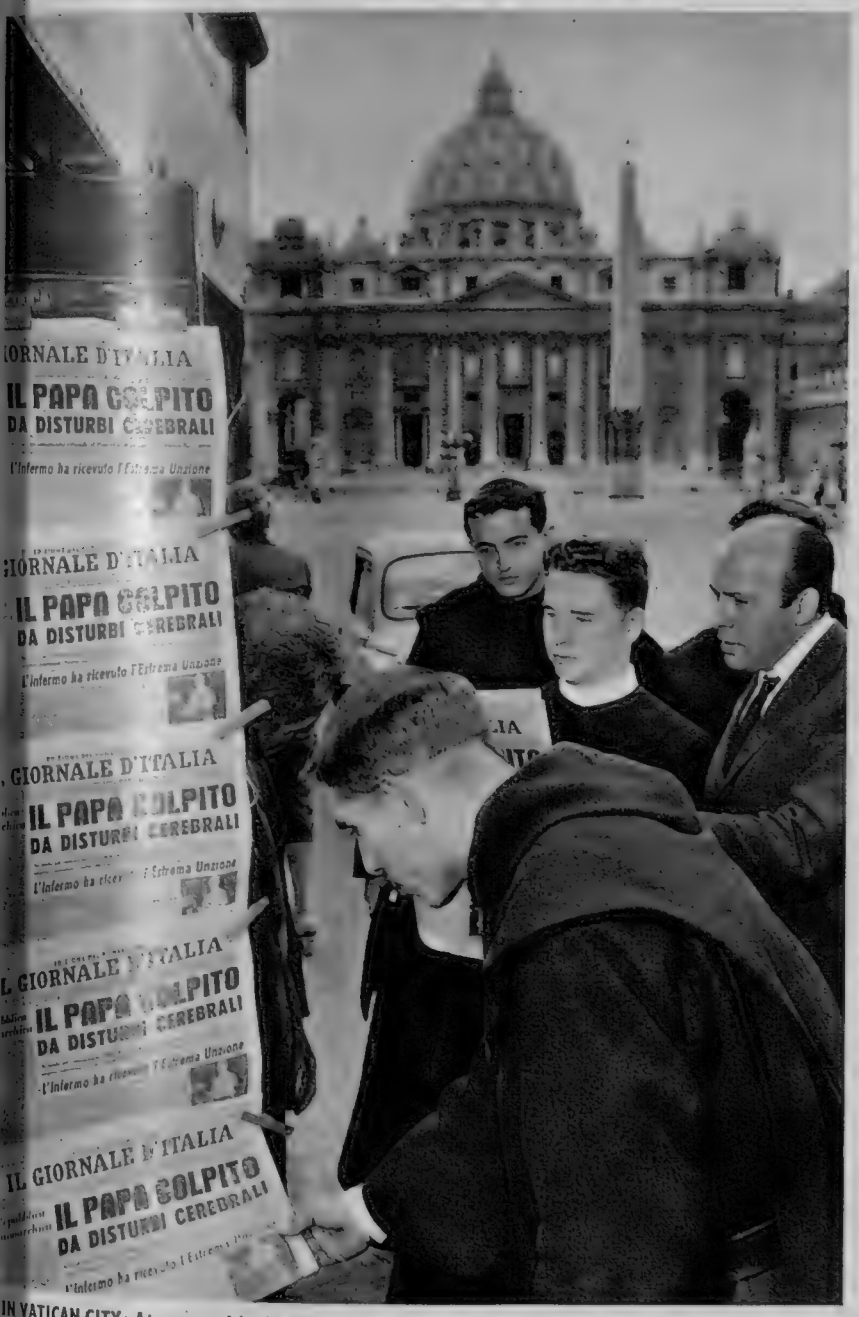
THE LIFE OF POPE PIUS XII—THE LAST DAYS

As messages flooded into Castel Gandolfo, the Papal summer palace just outside Rome, it was hoped at first that the Pope would recover from the stroke which he suffered. Although his condition was described as grave, there was some cause for optimism. The Pope received people at his bedside and spoke to them lucidly. But later, the feeling in Vatican circles grew more despondent. His temperature rose and his pulse rate increased. A second stroke followed. Heart and lung complications set in and he lay unconscious in an oxygen tent. It was realised that he was beyond human aid. Father Pellegrino, broadcasting for Vatican Radio from a room at the Palace adjoining the Pope's, said: "Nothing but prayer is left." Mgr. Tardini, the Vatican Pro-Secretary of State, and one of the Pope's closest collaborators, celebrated Mass nearby. The Pope's closest relatives, Signora Rossignani, his widowed sister, and his three nephews, the Princes Marcantonio, Giulio and Carlo Pacelli, kneeled for many hours at the bedside.

At 3.52 a.m. (2.52 a.m. G.M.T.) on the morning of Thursday, October 9, it was announced on Vatican Radio in a direct broadcast from an antechamber to the Pope's bedroom that the Pope had died. From all the world tributes were paid. The Queen sent a message to the British Minister to the Holy See commanding him to convey to Mgr. Tardini, the Vatican Pro-Secretary of State, an expression of the deep sorrow with which Her Majesty

VISITORS TO THE POPE: *Left*—Monsignor Dell'Acqua, Pro-Secretary of State of the Vatican City, arrives at Castel Gandolfo. *Centre*—Cardinal Tisserant, the Dean of the Sacred College, descends from an aeroplane at Ciampino Airport, in Rome. He flew back from France on hearing of the grave nature of the Pope's illness. *Above right*—**Signora Elisabetta Rossignani, Pope Pius XII's sister, enters her car at the Papal summer residence after visiting her brother.** Although the Pope had not appointed a Chamberlain of the Holy Roman Church, Cardinal Tisserant assumed the duties of the arrangements. To the Chamberlain falls the duty of formally establishing death after the private physician has declared life extinct. He removes the Fisherman's Ring, one of the symbols of Papal authority, from the dead Pope's finger and sets in progress the proper procedures necessary for the interregnum. Later, the Cardinals nominated Cardinal Aloisi Masella as Chamberlain of the Holy Roman Church.

On right—
OFFERING WISHES FOR THE POPE'S RECOVERY: The British Ambassador to the Holy See, Sir Marcus Cheke, goes to the summer palace.



IN VATICAN CITY: At a news kiosk a friar, three priests and another passer-by read the headlines in the afternoon papers. In the background is St. Peter's Basilica. These papers in Italy on October 6 had the headline, "Pope struck by cerebral disturbances."

THE GATES ARE BARRED: After the announcement of the death of Pope Pius XII a massive chain is pulled across the great gateway of the Papal summer residence. All the Swiss Guards had been withdrawn earlier and all the palace doors were closed.

and the Duke of Edinburgh received the news. The message continued, "This sad event has revived in Her Majesty's mind the impressive memory of her meeting with His Holiness in 1951, and the recollection of his unfailing kindness to members of the Commonwealth Forces during the war years."

Statesmen throughout the world and religious leaders of all denominations issued messages of sympathy. In Washington President Eisenhower said, "The world is poorer because of the Pope's death." Cardinal Spellman, on his way back to the United States after having been received by the Pope in one of the last special audiences he gave, said "The Pope was the most impartial, most devoted peacemaker in our weary, warring world." In Paris, General de Gaulle said that the Pope's "fervent example inspired so many men with courage and hope." The Archbishop of Canterbury, Dr. Fisher, paid tribute to his ability and devotion, to the saintliness of his character and the singlemindedness of his Christian witness.

Confusion was caused by the fact that the Pope had not appointed a Chamberlain of the Holy Roman Church. This office is distinct from that of the Chamberlain of the Sacred College of Cardinals. This is held by Cardinal Ottaviani. It is to the Chamberlain of the Holy Roman Church that the duty falls of formally establishing death, after the private physician has pronounced life extinct. The duty on this occasion was undertaken by Cardinal Tisserant, the Dean of the Sacred College. Kneeling by the body, Cardinal Tisserant withdrew the veil from the face, calling the dead man by his baptismal name three times in a loud voice and tapping the forehead gently with a silver mallet. He then declared "*Vere Papa Pius XII mortus est*" . . . the Pope is truly dead.

ST. CLEMENT DANES RESTORED

The Famous Church in London, Which was Heavily Damaged by Bombing in the Last War, is to be Reconsecrated To-morrow in the Presence of the Queen

INSIDE THE RESTORED CHURCH: In this view of St. Clement Danes, in the Strand, London, looking from the balcony towards the altar, can be seen the ceiling dominated by the Royal coat-of-arms. Inlaid in the floor are 735 badges of R.A.F. units all over the world, carved in Welsh slate. *On right*—In the crypt is the font given by the Royal Norwegian Air Force, made of black granite with a red wood cover. It bears an inscription in Norwegian which, translated into English, means "To the memory of fallen fliers."

To-morrow, Sunday, October 19, the historic church of St. Clement Danes, in London, one of Sir Christopher Wren's most affectionately remembered masterpieces, will be reconsecrated in a service attended by the Queen. After its damage by bombs on the night of May 10, 1941, St. Clement Danes stood derelict until, in 1953, the Arts Council accepted the church into its keeping, from the diocese of London, for use after restoration, by the Royal Air Force. It will serve as a perpetual shrine of R.A.F. remembrance. The four years of reconstruction has cost some £250,000, partly subscribed by war damage payments and partly by bequests and donations from all over the world. The new design was by Mr. W. A. S. Lloyd, the architect in charge of the restoration, who followed as closely as possible the original design of Sir Christopher Wren.

In the tower the famous "Oranges and Lemons" bells (recast from those of the old building) ring out the tune of the nursery rhyme again, as well as the R.A.F. march and an Easter hymn. Since the church is to be used for special services, the seating arrangements have been given much attention. As well as the pews on the ground floor, there are galleries along the sides of the church and at the West End. Pews in the body of the church are telescopic. They can be drawn out across the wide central aisle to provide additional seating to a maximum of about 800. On the Royal coat-of-arms emblazoned on the ceiling of the church is an inscription in Latin by Professor E. Laughton, of Sheffield University. This, translated, reads: "Built by Christopher Wren, 1681; Destroyed by the thunderbolts of Air Warfare, 1941. Restored by the Royal Air Force, 1958."

A GIFT FROM THE ATLANTA ENGLISH-SPEAKING UNION: The curving spiral staircase is a gift from the Union in the American city in Georgia. The tablet commemorates R.A.F. men trained in Georgia, 1941 to 1942.

A CHURCH DESIGNED BY WREN: The view looking along a gallery shows the organ at the West End. The organ has been given by the American Air Force.

PROGRESS IN INDUSTRY AND ENGINEERING—*A Weekly Survey of Achievement in Britain and Overseas*

Effervescent Market—The Flood of Soft Drinks

By "THE SPHERE" INDUSTRIAL CORRESPONDENT

IT is said that when Schweppes introduced its bitter lemon and bitter orange drinks last year what it had mainly in mind was a rather more sophisticated alternative to the grapefruit or pineapple juice that the woman who doesn't much like drink orders when in company. In fact, these drinks have had an instant and rather unexpected success as something else—as a "mixer" to add to gin. The drinks have no less sugar in them than any other fruit juice; the "bitter" edge to their taste comes from a trace of quinine; and it is in fact partly at the expense of the quinine tonic waters, including Schweppes' own, that their sales have grown. The fillip they gave Schweppes' turnover last year, therefore, was accompanied by a shift in the group's pattern of sales that its market researchers had not predicted.

This is almost typical of the soft-drink market in Britain since the war: innovation, success and expansion, but not quite according to plan. Two or three times in the last decade radical changes have been predicted in the soft-drink industry as the result of fresh products and developments. In practice, all have been successfully assimilated without, so far, any revolutions in the industry. Their effect, rather, has been to accelerate its extraordinarily rapid expansion.

one British household in ten has a refrigerator (in America five homes out of six have and the other has an ice-box); and not every shop in Britain that sells Cola is prepared to lay out £100 for a cooling cabinet, so that fairly often the drinks are not served at their best.

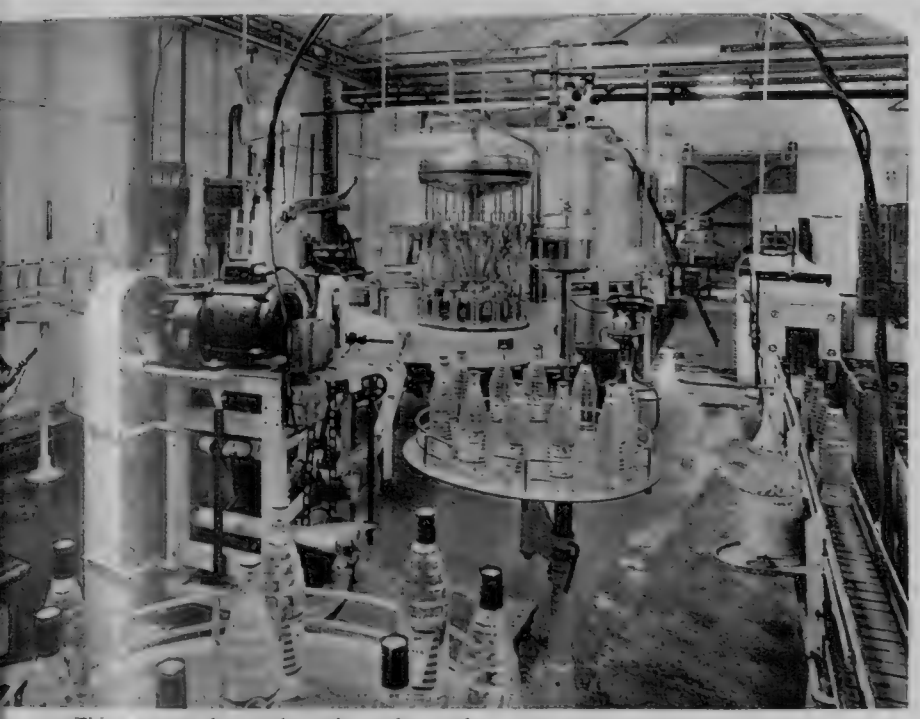
At the same time, the heavy advertising expenditure put behind the American drinks, particularly on posters, has had two effects on the soft-drink market in this country. It has helped to stem the lead that the concentrated soft drinks have been gaining over mineral waters; and inside the mineral-water market it has strengthened national brands at the expense of the local makes.

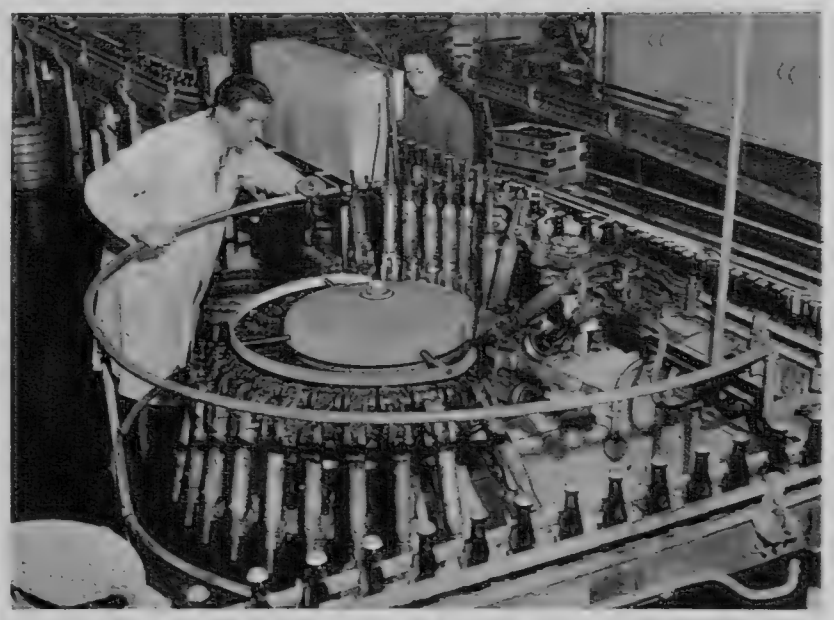
Britain is now spending probably £80,000,000 a year on soft drinks. Total consumption is reckoned at about 350,000,000 gallons—about 200,000,000 gallons of unconcentrated mineral waters and 150,000,000 gallons of concentrated fruit drinks (one multiplies the actual quantity of concentrated liquid sold by five to allow for the addition of water). The mineral waters have only just about doubled their sales since before the war; sales of concentrated drinks are between four and five times their pre-war level. In the last five years the American invasion has strengthened the mineral waters, but the concentrated drinks are still expanding faster.

fruit squash to drink at home rather than a crate of mineral waters, plus the prestige and the habit derived from the Ministry of Health subsidy for orange-juice, has favoured the fruit squashes again.

All these factors may eventually mean change for the structure of the industry. The reason why up to now not even the companies whose names are household words have been able to gain any real dominance in this market, with its several hundred very small manufacturers, has been a matter of transport. The cost and weight of a glass bottle compared with its contents, and the danger of breaking it, have traditionally meant that soft drinks cannot be distributed economically over very long distances. One would need a vast number of small local factories to supply right across the country; conversely, the small man selling his minerals within a very short distance of his bottling plant has enjoyed considerable protection from his big competitors.

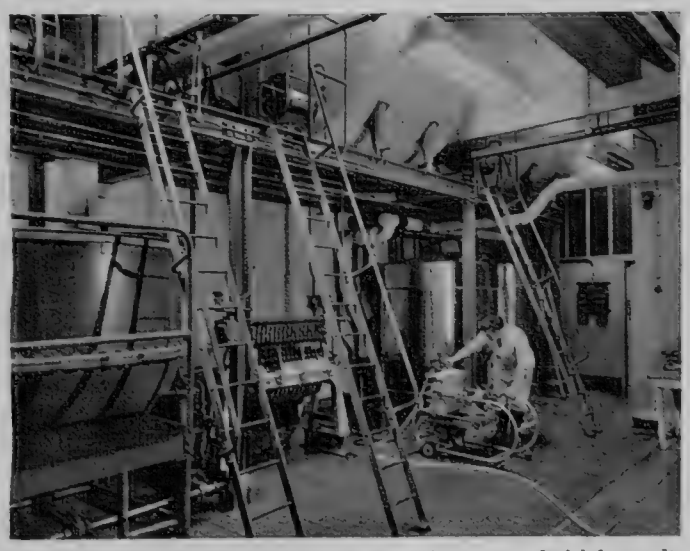
But the growing importance of concentrated drinks, to which the bottle adds a considerably smaller proportion of the total value, strengthens the regional and even the national manufacturers, and leaves the local man much more vulnerable to their press, poster, and now television advertising.





ALONG THE PRODUCTION LINES: At the Fulham plant of Canada Dry (London) Limited the spinner-mixer machine is mixing the syrup and carbonated water in the bottles to produce the finished drink. *On left*—Squash bottles pass along a conveyer belt at the firm's plant at Dulwich. *Below left*—The view of the syrup room at Fulham shows the sugar-dissolving vessels, filters and pasteurising tanks.

This year, perhaps, there have been clearer signs of the long-predicted changes in the structure of the industry: a number of amalgamations, culminating in the competitive take-over bids that ended with the Beecham Group outbidding Schweppes for control of Thomas and Evans. This firm, makers of Corona minerals, is among the largest suppliers of soft drinks in Britain. By buying it the Beecham Group has acquired fifty-three bottling factories, a road transport fleet, and contact with a chain of retail outlets which may be particularly valuable to it in the competitive market. Beecham already markets Quash fruit squash, a number of specialised drinks, including Ribena, Lucozade and pure lemon-juice, and also holds the franchise for Coca-Cola in the Midlands and North of England. Schweppes holds the franchise for Pepsi-Cola in this country: it may be that the Thomas and Evans distribution system had particular attractions for both contenders as a way of strengthening the market coverage for their respective American drinks.



The "American invasion," which began in 1952 with the arrival of the two Cola drinks, to be followed by Seven Up and Canada Dry, has had a continuing effect on the market for soft drinks in this country, but has by no means overwhelmed it. The Colas did in themselves differ slightly from the traditional British mineral water. In addition to sugar and fruit flavour they contain an extract of cola bean which gives each bottle about as much caffeine as a cup of tea, making them non-alcoholic stimulants. These American brands have built up big sales in Britain; but their growth has been moderated by the fact that they cost more than British minerals and that they taste best when chilled. Only

The fact that consumers' expenditure on soft drinks has grown two and a half times since before the war, apart from price increases, while total personal spending of all kinds has only gone up about 20 per cent. is given many explanations in the trade. Standards of living have been rising generally, and particularly in working-class homes, where alcohol is traditionally drunk in pubs and extra drinking at home tends to be soft drinks. Hard drink has had higher taxes to pay. Moreover, the country's tooth seems to have been growing sweeter in general, and soft drinks were freed of control some years ahead of the sweets. While the S.D.I. control remained, it put the accent on concentrated drinks rather than minerals; the greater ease of carrying a bottle of

Even the broad front of the concentrated drinks is technically a divided one. In addition to the traditional fruit squashes and cordials which are based upon fruit-juices imported in highly concentrated forms, plus oils extracted from the peel of the fruit, a number of "comminuted" concentrates are now being marketed. To make these, the whole fruit is used at once, crushed and shredded into a drink that does not include as high a proportion of pure fruit-juice, but which often has a somewhat sharper taste. For home tastes, this fresh method of making concentrated drinks seems to be gaining at the expense of the squashes.

In pubs and clubs the market is divided between two different kinds of soft drink, the "mixers" and the pure fruit-juices. The mixers are accompaniments to alcohol, the fruit juices alternatives—though, as bitter lemon has demonstrated, drinks can sometimes change roles. The mixers have been gaining since the war from rising income standards that move drinkers from beer to spirits—and perhaps from the prolonged shortage of whisky that seems to have brought about a lasting shift in taste towards gin, which is not often drunk without some kind of sweetening soft drink. In the pub, the restaurant, the sweet shop and the parlour the British people are now drinking something over 6 gallons of soft drink per head per year. In the trade, guesses vary whether it will take us another ten years or only five to reach the current American consumption of about 10 gallons a head.

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NEW FORTH BRIDGE

Workmen are carrying out preliminary work on the site at Port Edgar, South Queensferry, for a causeway which will stretch 600 ft. into the River Forth and be used by lorries bringing materials for the construction of the new Forth Road Bridge. In the foreground a lorry is dumping stone for the foundations. Visible in the background is the famous cantilever railway bridge. When completed, in 1962, the new bridge will have the largest clear span in Britain and will be the biggest suspension bridge in Europe. The building of the foundations and piers is being carried out by John Howard and Company Limited, while the superstructure is to be constructed by the A.C.D. Bridge Company, a consortium of three British firms—Sir William Arrol and Company Ltd., the Cleveland Bridge and Engineering Company Ltd. and Dorman Long (Bridge and Engineering) Ltd.

STRAND ACTIVITY

In the picture *on left* police direct traffic past the site of the old Gaiety Theatre where the first of three hot-water vessels for the new offices of the English Electric Co. Ltd., is being unloaded. The view *on right* shows the vessel being lowered into the basement 30 ft. below street-level with the aid of one 25-ton and two 20-ton mobile cranes. The vessels are to be used for storing hot water at 270 deg. Fah. which is provided by means of electrode boilers rated at 1,200 kW. Each vessel has a capacity of 24,000 gallons, and, when filled, weighs about 150 tons. The heating engineers are Brightside Heating and Engineering Co. Consulting engineers are Messrs. Oscar Faber and Partners.

A SKILFUL OPERATION AT TEWKESBURY

The job of negotiating a depropanizer column for the new petrol refinery at Milford Haven, in Pembrokeshire, through the narrow streets of Tewkesbury, in Gloucestershire, proved more difficult than was at first anticipated, and the successful completion of the manœuvre reflected credit on the skill of the driver. In the picture *above*, a set of wheels is manually operated to avoid collision with an island. The depropanizer column, made by Babcock and Wilcox Ltd., is 88 ft. 6 ins. long and has an inside diameter of 6 ft. It weighs 42 tons and was transported by road to Pembrokeshire from Oldbury, Birmingham.

FLAMEPROOF BATTERY LOCOMOTIVE FOR THE N.C.B.

The picture is of a flameproof battery-type locomotive, one of which has been ordered from Metropolitan-Vickers Electrical Company Limited by the National Coal Board (East Midlands Division) for use in Markham Colliery, near Chesterfield. The locomotive, a Type DBF/12, will be used chiefly for hauling man-riding carriages and material trains over the 2-ft. gauge lines, involving gradients of 1 in 21·2. It derives its power from a lead-acid battery of 100 cells (415 Ah. capacity at the five-hour rate of discharge) which is divided into two equal sections housed in identical steel containers and is driven by two series wound traction motors specially designed for underground mining work. The locomotive has a smooth exterior throughout its whole length, with no projections liable to cause accident by catching on structures or the clothing of passing men. The forward outlook of the driver is completely unrestricted and on one side the cabs are open.

THE CONSERVATIVE PARTY CONFERENCE AT BLACKPOOL: Powerful lights illuminate the scene inside the Empress Ballroom at Blackpool. Mr. Iain Macleod, the Minister of Labour, told the delegates on the opening day last week that he would promise them two things. The Government would not be diverted by threats of industrial and political action and that secondly they would continue to try to promote the understanding and sense of partnership which must provide the basis of all human and industrial relationships.

TORIES CONFER

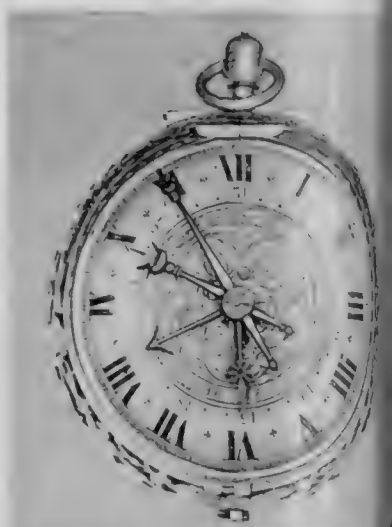
Speakers at the Annual Conservative Party Conference at Blackpool

News of forthcoming White Papers was given at the Conservative Conference. The Minister of Education announced one which would, among other matters, incorporate a five-year plan for the building of more schools, particularly, so Mr. Lloyd emphasised, secondary modern schools to provide for the average, sensible child. The Minister of Pensions announced a White Paper on pensions and allowances. He gave a hint that perhaps it would be concerned with some relationship between pensions in retirement and earnings before retirement. Delegates at the Conference were alarmed at the increase of crime. Many speakers advocated the return of corporal punishment and a resolution was passed calling for "the application of more effective measures to reduce crime." The Home Secretary, Mr. R. A. Butler, strongly opposed any return of corporal punishment. He said, however, that he would welcome a debate on the Wolfenden Report

LEADING SPEAKERS IN ACTION: *Left*—Mr. Geoffrey Lloyd, the Minister of Education, emphasises a point. Summing up the debate on education policy, he promised that in the new White Paper will be incorporated a five-year plan for the building of new schools. *Centre*—Mr. Henry Brooke, the Minister of Housing, addresses the conference. He said the Government aimed to widen the whole field of house purchase. *Right*—Mr. Iain Macleod holds the T.U.C. General Council's report of the Bournemouth Congress in his hands.

IN THE MIDST OF DEBATE: *Left*—Dr. Charles Hill listens intently. *Centre*—Sir David Eccles, President of the Board of Trade, looks in an urbane mood. He said that since Lord Woolton's famous White Paper at the end of the war, the Conservatives had been fully pledged to maintain high and stable employment. This had been done despite the recession in world trade. *Right*—Lord Hailsham, who is Lord President of the Council and chairman of the Conservative Party, is seen in a meditative moment.

CLOCKS FROM THE ILBERT COLLECTION: *Left* is a night clock made by Joseph Knipp. The hours of darkness are shown by a revolving disc carrying the hour numerals, pierced to show the light from an oil lamp inside the clock. On the bottom of the case is lettered "From a Model designed by Prince Rupert" and at the top "Late the Property of H.R.H. The Duke of Sussex, K.G." *Centre* is an elaborate table clock with a case of tortoiseshell inlaid with pewter. It gives not only the time, but also astronomical and calendar information. *Above right* is an organ clock, made by Geo. Lindsay, watchmaker to George III. It has a pipe organ with two stops; six tunes changed manually are played at three-hour intervals. These timepieces are on show at the "Pendulum to Atom" Exhibition being held at the Goldsmiths' Hall, London, until October 25.



A CARRIAGE WATCH: It was made by Et... in the middle of the seventeenth ce... About 5 ins. in diameter, it not on... dicates the time but also strikes the q... shown and has an alarm mech...

RARE AND FAMOUS TIMEPIECES: *Left* is the back of a complicated table clock, inscribed "Thomas Starck. Anno 1620." The elaborate metal fretwork is carved to represent a variety of animals. *Centre* is a world-famous grandfather clock by Tompion, in its case of mulberry wood. *On right* is a pocket watch inscribed on the interior "Mary Carr A.D. 1789."

TELLING THE TIME FOR CENTURIES

Clocks and Watches from the Ilbert Collection on Show at the "Pendulum to Atom" Exhibition at the Goldsmiths' Hall in London

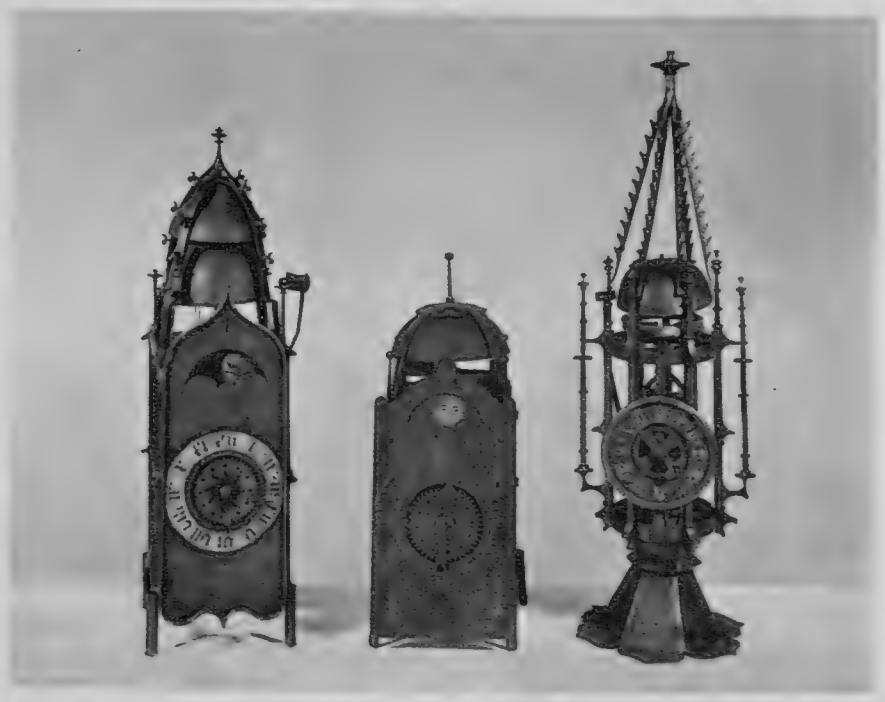
In the Egypt of 1400 B.C. it is known that there existed water-clocks, known as clepsydrae. These had a parallel development to the sundial. Julius Cæsar, in his famous visit to England, noted that by accurate water measures summer nights in this latitude were shorter than those in Italy. Thus far back in history are buried the origins of to-day's clocks and watches, but it was probably not until the thirteenth century that monks made the first clocks, complete with weights, trains of toothed wheels and escapements. Thereafter, and given impetus by the discovery by Galileo of the properties of the pendulum, clocks proliferated. They began not only to tell the time of day and to chime, but also to record the date, the day, the month and the year, to wake people up with alarm bells, to give astronomical information about the moon and the stars, and to play tunes. One German clock even lit a candle before waking its owner up.

Many of these fascinating timepieces, in their decorative and richly-carved cases, are in the Ilbert Collection, more than half of which is on show to the public for the first time at the "Pendulum to Atom" Exhibition, organised by the British Clock and Watch Industry, at the Goldsmiths' Hall in London. After the exhibition, which closes on October 25, the timepieces from the Ilbert Collection were to have been auctioned by Chri... but they have been saved for the nation through... generosity of an anonymous private benefactor. Pri... place in the exhibition perhaps goes to the world-fa... grandfather clock made by Tompion, valued at a... £6,000. It goes for a month without attention and h... case of rich mulberry wood. Nearby it is a s... long case or grandfather clock, which goes for tw... months without attention. It was made by D... Quare for, it is believed, Hampton Court Palace.

Perhaps the first important clocks were "turr... clocks, fitted up in monasteries or cathedrals. Ric... de Walingford records one such being placed in t... monastery at St. Albans in 1326. These early cl... possessed only one hand; the concentric minute hand... not introduced until about 1670. A weight fixed to a... coiled round a barrel, with the great wheel attache... the barrel, provided the motive force. It was not u... Galileo watched the lamps in Pisa Cathedral swing... to and fro and timed them against his own pulse, tha... property known as isochronism was discovered: ... property is that either large or small arcs are trave... in equal periods of time. While Galileo's theory is

ERMAN CLOCKS FROM 1670: On the left is a "tabernacle" clock. The lion surmounting the clock in the centre moves its eyes from side to side to show the passing of seconds and at the hour opens and closes its mouth in time with the striking of a bell. On the right is a small complicated clock giving much astronomical information.

DUTCH AND ENGLISH TIMEPIECES: On the left is a brass lantern clock of about 1630, made in Holland by Joannes Muys, with an elaborate calendar dial. The centre one is an English "Chamber" clock made in iron in 1550. On the right is a brass lantern clock made in England in the seventeenth century incorporating an alarm



LARM CLOCKS: Unusual items from the Ilbert Collection are French and German alarm clocks made in 1600. Those on the left and right strike a bell at the selected hour. The one on the right has a casing of rock crystal. In the centre is an ingenious timepiece which, by means of a hammer flint and a gunpowder trail, lights the small candle on the right-hand side at the same time as the hammer strikes a warning note on the base.

n right—

CRUCIFIX CLOCK: This was made early in the seventeenth century from ebony, silver and gilt. The movement is in the base and the hours are indicated by the revolving ring at the top, with the beak of the eagle as the pointer.

DRIVEN BY WEIGHTS: These three German iron clocks with their distinctive Gothic appearance were made in the years between 1550 and 1580. Each of them strikes the hours, and the left-hand and centre ones also show the phases of the moon. Many early clocks before the discovery of the pendulum were actuated by means of a weight attached to a string wound round a barrel: the weight moved the barrel, activating the hands.

On left—

AN OVAL WATCH: On the back is the inscription "Repaired and mended by Thos Peirce London 1724." The case is of tortoise-shell. In common with many early watches, it shows the date, day and month as well as the hour, by a single hand.

osolutely correct, it is nearly true for small arcs. The endulum came to be used in clocks. Later inventions hich made possible more accurate escapements—keeping e pendulum in motion and regulating the movement of e hands—led to the grandfather clocks keeping good me for weeks without adjustment.

It was as long ago as 1490 that the mainspring as a otive force was invented by Peter Hele, of Nuremburg. his enabled smaller and smaller clocks to be made, eading to the wristwatch of to-day. These developments in mechanisms for the accurate measurement of ime were paralleled by the increasing care and elaboration f the cases in which they were placed. By contrast with he functionalism to-day of the inexpensive and massroduced clock, these early timepieces formed important tems of decoration. Clocks to-day more accurately tell he time, and function under the most adverse of condiions, but one may mourn the passing of the grandfather lock, whose solemn tick and portly mien governed the ousehold of many Victorian homes.

Valued at more than a million pounds, the exhibition t the Goldsmiths' Hall shows the development of the lockmaker's art and craftsmanship from a sinking bowl lock as used by the Ancient Britons and pocket sundial, to the caesium atomic clock of to-day, which, it is claimed, will lose no more than one second during the next 300 years. This works on the oscillation occurring inside the caesium atom. In contrast to this modern marvel is the Cassiobury Clock, a pendulum clock said to be the oldest of its type in existence. Also on display are a number of electric clocks, beginning with a pendulum clock by Alexander Bain, who made the first electric timepiece in about 1840.

Many other modern developments are shown, including Britain's Speaking Clock. Twenty-two years old this year, it has been used over 617,000,000 times in London alone since it was first introduced and now carries time announcements throughout 113 distribution centres in Britain. In the exhibition is the first time recorder ever made. It is an in-and-out clocking device, recording the time of employees' arrivals and departures, invented in America in 1885 and marketed in this country for the first time in 1890. With it are the latest electric recorders, compact devices which are, in effect, clockwork brains recording promptness, lateness, lost time and overtime.

Other stands in the exhibition show the complex mechanical operations needed in the manufacture of to-day's precision instruments. One showcase shows some of sixty operations required to make a watch jewel, while another is devoted to the history of hair springs. Originally hair springs were made from pig's bristle, hence the name. A third stand shows time switches and other units such as those used in modern appliances in the house in, for instance, washing machines.

Despite the complexities and marvels of modern precision engineering, and it is now claimed Britain is once again among the leading horological manufacturers in the world, many visitors to the exhibition are likely to be attracted primarily to the historical section, organised by Colonel Humphrey Quill, and including some 1,500 timepieces. These, ranging from the delicate and shapely eighteenth-century pieces to the rather barbarous Gothic clocks from Germany made in the sixteenth century, have recorded the passing of history. To-day, living in an age split by the shriek of the five o'clock hooter and often governed by a terrifying mechanism which records how early or late you are for work and which is impervious to an apologetic smile, it is pleasant to look at the delicate tracery of these treasures from the past and to listen to the dance tunes played by the organ clock made for George III.

The World of Books

VOYAGES AND ADVENTURES

The Early Life of a Cunard Commodore; a Journey Round the World; a New Assessment of Elizabeth I; Aspects of India; an Outstanding Historical Novel

SIR JAMES BISSET, known to thousands of Atlantic travellers as an officer and later the Commodore of the Cunard fleet, has had a long, distinguished and lively career at sea, and although the passenger's-eye-view of him is apt to be a burly genial figure on the bridge or the decks of a vast liner, he did, in fact, start his sea life in sail, at the age of fifteen, sixty years ago. SAIL HO! (Angus and Robertson. 21s.) is the first volume of his autobiography and begins with an early attempt at stowing away (unsuccessfully) and his first berth as an apprentice in a thousand-ton, three-masted barque, bound for Australia round the Cape of Good Hope and back round the dreaded Cape Horn, a year's voyage.

Sir James has been helped in the writing of his book by Mr. P. R. Stephensen, but it is his own vitality and humour, his own love of the sea and his own memory of young days of adventure and misadventure which make it such vigorous and vivid reading.

The author of GIVE ME THE WORLD (Gollancz. 21s.) seems to have the adventurous spirit, too, and some to spare, for at the age of twenty-five, with a six-year-old son and a very moderate amount of money, she sailed from San Francisco to the Far East on the first leg of what was to prove a two-year trip. Mrs. Leila Hadley had already given proof of initiative and energy in a public relations job at which she had been earning her living; both these qualities were called into play on her journeyings and also the quality, not always possessed by women, of a healthy and practically insatiable curiosity about people and places. Practically, rather than quite insatiable, because there came a day in Ceylon when the sights and smells of a Chinese Death House proved rather too much for our intrepid traveller.

Mrs. Hadley writes with immense verve of all her exploits—and of her son's—in Siam, Hong Kong, India and the Nicobar Islands, but for most readers the best part of her story will be the account of the cruise in a small schooner, with which four young men were attempting a round-the-world voyage. Now she is married to one of that crew and her first daughter is named after the ship. An unusual book and a very unusual young woman, both of them highly exhilarating.

The Elizabethan age is the subject of the three next books, beginning with Miss Elizabeth Jenkins' study of the Queen herself, a biography which in colour, sweep and vitality is nothing short of magnificent. ELIZABETH THE GREAT (Gollancz. 21s.) is not just one more in the list of books that have already been written about this endlessly fascinating woman and monarch; it is a fresh assessment and a fresh portrait. The research and the documentation of this work must, without any doubt, have taken long and studious hours of application, yet the effect which the book gives is of lightness and pace: a story which must be read with the same continued zest as the most exciting of novels.

Elizabeth is shown here in many guises, as a woman in love, a scholar, a statesman, a playgoer, a speaker or a woman of fashion, but in none of these aspects is she other than a queen. Miss Jenkins has achieved something, too, that not every historian of this period quite manages to convey. She has shown the queen as a personage of very decided character as others have done, but she has also shown us the *kind* of character that that was and made Elizabeth into a being of flesh and blood, however princely that flesh and blood. It would, I think, be difficult to recommend this book too enthusiastically.

THE ELIZABETHANS AT HOME (Secker and Warburg. 25s.), by Miss Elizabeth Burton, is in many ways a companion volume since it gives such a richly detailed picture of the material background against which the queen and her subjects moved. Here, in fact, are described some of those extravagant and beautiful gifts exchanged between Elizabeth and Leicester: one of them appears to have been the first wrist-watch, "an armlet of gold set with rubies, diamonds and pendant pearls and having 'in the closing thereof' a clock." Food and drink, as well as eating habits and the hours of meal are discussed and an authority quoted to show that the customs of the poorer people were scarcely worth mentioning. Throughout the volume, which also treats of furniture and houses, cosmetics, pastimes, gardens and amusements, there are drawings by Mr. Felix Kelly which are both decorative and a very real help in imagining the domesticities and grandeurs that existed four centuries ago.

SPANISH DANCERS IN LONDON: In a new version of *The Three-Cornered Hat*, Antonio dances the Miller in the ballet with music by de Falla. It is one of the new items in the programme presented at the Coliseum Theatre. The new version of the ballet has sumptuous costumes by a leading Spanish designer and is danced by Antonio, Rosita Segovia and the company in a gay evocation of Spain. The company presents with imaginative skill the many varied forms of Spanish dancing, from a suite of Basque dances to gipsy dances, accompanied by flamenco singers. Once again Antonio dances his world-famous and electrifying solo Zapateado. The six-week season ends on November 1.

A SCULPTOR'S NOTEBOOK: This double page of a set of drawings of four seated figures is reproduced from *Heads Figures and Ideas*, by Henry Moore, published by George Rainbird Limited in a standard edition at £10. A signed and numbered limited edition, with an original water-colour drawing by Henry Moore, costs 100 guineas, and without the water-colour, 20 guineas. The handsome book has sixty-four pages on heavy cartridge paper containing exact reproductions and notes recording the artist's first spontaneous ideas as drawn in his working notebooks. Many of the sculptor's monolithic and impressive works have their origins in the sketches and ideas shown in this volume. The selection was made by Henry Moore, sometimes in collaboration with Geoffrey Grigson, who has contributed an introductory poem. One comment written beneath the photograph of an ancient Egyptian sculpture of a woman's head typifies the qualities which Henry Moore attempts to express, often successfully, in his working drawings and in the final sculptures. "I would," he writes, "give everything, if I could get it into my sculpture, the same amount of humanity and seriousness; nobility and experience; acceptance of life, distinction and aristocracy. With absolutely no tricks, no affectation, no self-consciousness."

An American scholar, Professor Edward B. Partridge has written a study of the major comedies of Ben Jonson, a critical work which will be chiefly of interest to fellow scholars and to students of the period and its plays, but which may also appeal to less thoroughly informed readers. Professor Partridge devotes a chapter to *Volpone* and to each of the other major plays, as well as three minor ones, and finally sums up Jonson's intrinsic value and his meaning for the modern reader in a section that is the most lucid and the most helpful in the book. THE BROKEN COMPASS (Chatto and Windus. 25s.) is intrinsically a serious and even academic work. For anyone with a real interest in the subject it should prove illuminating.

Remembering the enchantment of Mr. Roderick Cameron's photographs in *Shadows From India*, that album of exquisite black-and-white and softly grey pictures, it was no surprise to find that the same author's TIME OUT IN THE MANGO FLOWERS (Heinemann. 30s.) had photographic illustrations of comparable distinction. In this travel book Mr. Cameron describes his travels up and down the Indian Republic, from Madras to the Himalayas and from Calcutta to Bombay, recalling ancient histories, catching our attention with new anecdotes and fresh experiences and, throughout it all, showing that delicacy and quickness of perception which mark the born author-traveller. Mr. Roderick Cameron's particular gift is that he can evoke the magic of what he has seen. And that, besides his superb photographs.

India again with Miss Lizelle Reymond's account of the post-war years she spent in a Himalayan community, entering into the day-to-day existence of her friends and learning an immense amount, as it were, from the inside about an age-old traditional pattern of life which is scarcely affected by the Westernisation sweeping through India. MY LIFE WITH A BRAHMIN FAMILY

EVERY INCH A KING AND MAN

In defining the scope of his official biography of King George VI, Mr. John Wheeler-Bennett reminded us that the official biography of George V was a " dichotomized work." The personal memoir came out in 1941, the political biography in 1952. That plan enabled the first author to secure vital evidence from that King's surviving contemporaries and allowed time for some of the mists of controversy to clear from the political scene before the second began his work. As the first of the " dichotomists," I applaud the decision not to follow the same plan, though grateful for the opportunity it brought me. In his KING GEORGE VI, HIS LIFE AND REIGN (Macmillan. 60s.) Mr. Wheeler-Bennett's task was to depict the King as both Sovereign and man, and admirably he has done it in a monumental but perfectly frank and human book. The way of " dichotomy " implied that each author of *George V* inevitably must poach in some degree on the territory of the other. For never was it truer than of George V and of his son that unexpected kingship made the man no less than the character of the man perfected the kingship. A political and historical background is as necessary in a personal memoir of a Sovereign as is the private and family background in the political biography.

There is one snag in deciding on a single volume. If it must catch the contemporary evidence, it must be written rather too soon after the subject's death to admit of the clearance of controversial mists and the discovery of all relevant archives. But this objection is much less valid in the case of Sovereigns, whose archives always are full and up to date, and every important witness available and alerted. In this fine biography Mr. Wheeler-Bennett has made fullest use of all these sources to produce a history of a reign and portrait of a King and man which are constantly exciting, lucid and concise, frank and free from flattery, and documented with an authority and fullness which seem to preclude inaccuracy. Restricted space prevents any detailed criticism or quotations. The points which perhaps struck me most include the contrast between the happy childhood of George V and the occasional harshness of that of his own children, the tremendous influence of Queen Mary in George VI's family life, and the now released inner history of the abdication and call to the throne as revealed in the King's private papers. But through all the latter part of the book, the increasing influence of the Sovereign's duty to advise and warn his Ministers and chiefs in war and peace is made abundantly clear, and the King's character is seen to develop from diffidence and anxiety to the serenity of experience and faith, while the courage with which he faced and overcame the handicaps of ill-health sets him down in history as a fine, brave man and a wise constitutional monarch, like his father.

Royal biography since Edward VII has grown ever nearer to honest-to-God biography, and Mr. Wheeler-Bennett has crowned that advance. It remains to say that still in biography as in life there are " men, women and Royalties." You see that truth in many matters by which Sovereigns set store, matters which seem trivial to those who do not understand the importance of the trappings of a throne and of the jealous regard for protocol which is part of a King's trusteeship even in a well-advanced democracy.

John Gore

PANORAMA OF THE CAPITAL OF FRANCE : The Seine flows round the Ile de la Cité and the Ile St. Louis, in Paris. The dominating feature of the former is the Cathedral of Notre Dame, with its twin towers. The second bridge from the foreground is the Pont Neuf, the oldest in Paris. The aerial picture is reproduced from the end papers, which are in colour, of *Paris and Its People* (Methuen. 4 gns.). The general editor is Robert Laffont and the translators from the French are Isabel Quigly and Barbara Bray. The sub-title of the book, " An Illustrated History," explains its intention. Altogether 900 photographs, paintings, prints, drawings and maps adorn the pages, all of them fitted to their particular periods. There are some superb plates in colour of which the most notable is the Crown of Thorns sequence in Sainte-Chapelle. The text accompanying the illustrations is full of out-of-the-way historical information. For instance, Charles V ordered a Turlupin heretic who had died in prison to be boiled in oil posthumously. One may question the historical accuracy of certain statements, and sometimes too much of the text and pictures is crowded upon a page. There is a useful appendix of maps showing the development and expansion of Paris. A luxury volume of this size cannot be carried about like a guide-book. But it should certainly be read and studied, because it will make the visitor to the French capital look at its monuments and glories with new appreciation.

AUSTRALIAN SCANDALS

A Turbulent Period in Sydney's History

Those who have lately read Mr. John Pringle's erudite appraisal of the Australian manner of living will get a rude shock when they come to tackle Cyril Pearl's WILD MEN OF SYDNEY (W. H Allen. 16s.). This is the tale of a turbulent, swash-buckling period in the social and political annals of New South Wales, when that brash and up-and-coming state boasted some of the fruitiest characters imaginable. Among them was wild John Norton, the English emigrant who quickly made his mark in Australian yellow journalism in the '80's and '90's. He went to such lengths in his portrayals of Royalty that he found himself on trial for sedition. Despite the virulence of the attack, the Crown dropped the charge, and Norton went on his drunken, ink-spelling, megalomaniac way. Many other extraordinary characters bestride these pages. Cyril Pearl has certainly written a racy and highly readable narrative, but in the end this unrelieved parade of scandal and intrigue tends to be sickening, and one turns from it in relief.

" Men who saw night coming down about them could somehow act as if they stood at the edge of dawn." Those were the words of a Confederate soldier in the American Civil War, but Harold Lamb, looking back across the centuries, uses them to mark his introduction to his story of CONSTANTINOPLE (Robert Hale. 21s.). Surely the quotation, so out of time, fits like a glove the circumstances when the long twilight fell on the Roman Empire during the centuries between A.D. 200 and A.D. 450. In the West that twilight ended in the darkness of the first Middle Age. In the East, however, the inhabitants of Constantinople learned the hard lessons of disaster, and they managed to hold back the night. Their efforts culminated in the age of Justinian in the sixth century. It was not a golden age, Mr. Lamb emphasises, but it was shaped by intense effort to hold to values in human life. The men and women of Constantinople saw the dawn and Mr. Lamb, with his accustomed skill, shows in graphic detail all the splendours of its emergence.

Scientific expeditions born of student enthusiasm are no rarity these days. Now here is the record of the Oxford University Expedition to Socotra in 1956, the first made to this island of the Indian Ocean since 1899. Douglas Botting, Chairman of the Oxford University Exploration Club and leader of the expedition, tells the story of his adventures in ISLAND OF THE DRAGON'S BLOOD (Hodder and Stoughton. 21s.). No Europeans live on Socotra, and Hadibo, the seat of the Sultan, an absolute ruler, must be one of the smallest capitals in the world. The expedition travelled widely throughout this strange and lovely land with its friendly but far from predictable inhabitants.

Leonard Outhwaite has managed to combine history, geography, and oceanography into a well-blended narrative in his history of THE ATLANTIC (Constable. 30s.). The author is to be congratulated on undertaking such a massive task and carrying it through with such skill. The book runs to nearly 500 pages, and has some excellent maps.

John W. R. Taylor rightly calls the Central Flying School the birthplace of air power, for it was formed in 1912 simultaneously with the original Royal Flying Corps. C.F.S. (Putnam. 21s.) is essentially a book for the flying enthusiast, but it is written with due regard for the general reader, and Mrs. Taylor has included many delightful anecdotes.

Rupert Croft-Cooke's THE GARDENS OF CAMELOT (Putnam. 21s.) is a third volume in the autobiographical vein in which he has given us so much pleasure in recent years. This time he takes us to the homes of his childhood, turning back with affection and amusement to life in a Surrey village in the days before the First World War.

R. C. E.

(*Continued from previous page*)

(Rider. 18s.) has considerable charm and it has been well translated from the French by Lucy Norton.

THE REBEL EMPEROR (Gollancz. 25s.) is Lady Flavia Anderson's story of that extraordinary Chinese figure, Hung, who initiated his own religion, based on his own naïve and highly eccentric interpretations of Christianity, and led his followers to Nanking, where he proposed to found the " New Jerusalem." His thousands of adherents—for they brought their families with them—followed him on the two-year march which he, in all misguided sincerity, saw as a crusade. After ten years and some merciless fighting it was " Chinese " Gordon who overthrew him. There is a wonderful sense of not so remote Chinese history here and an understanding of Eastern mystique that is rare in a Western writer.

" *What's to come is still unsure*," sang the greatest of our poets, and from that line Miss Naomi Jacob has taken the title of her latest novel, a story about her native Yorkshire in general and a family in an industrial town in particular. As always, this writer sketches in the background of smoky city and lovely, surrounding country with a familiar ease but, again as always, it is with the human characters of her story she is most concerned, and their contrasted natures, ambitious, hide-bound, kindly or progressive in feeling, show themselves chiefly through dialogue. Miss Jacob is essentially a romantic and WHAT'S TO COME (Hutchinson. 15s.) is unashamedly a love-story among middle-aged people.

THE TALL SHIP (Heinemann. 16s.) is a sea story with a difference: a tale of a captain whose ship is a fifty-year-old barquentine in which he has agreed to carry a party of refugees from Marseilles to Palestine. In the beginning his intention is to transport them as a good, paying job, but when they are refused admission and he realises that the fate of his list of displaced persons might be to return to their camps in Germany, something other than a commercial instinct stirs in him and his story becomes the saga of a trip half-way round the world. Moving and, at the same time, really exciting.

Miss Shirley Jackson is an American writer whose first story, as I remember, caused a shock of mixed pleasure and alarm when it was published in a New York magazine. Now she has a novel, THE SUNDIAL (Michael Joseph. 15s.), which is odd, beautifully written, engrossing and not altogether pleasant. The plot is concerned with a rich family in a New England village, to one of whose members an ancestor appears prophesying doom and destruction for anyone who is not a resident of the family mansion. What follows is often funny but even more often macabre, and the book as a whole is, to put it mildly, exceptional.

Historical novel of the week and, indeed, of many weeks, is THE BASTARD (Barrie. 21s.), an immensely long but continuously absorbing story of France in the first half of the reign of Louis XIV. Brigitte von Tessin has written about a soldierly nobleman who has had numerous affairs, an illegitimate son and a hard-fighting career by the time he weds his lovely young wife. It is with her, high-minded and courageous, that the story is concerned as well as with the boy and his unscrupulous father, and I can assure you that its 700 pages are not only worth reading but will seem half as many.

Vernon Fane

ACCENT ON STYLE

British Cars Again Steal the Limelight at the Forty-fifth International Automobile Exhibition at the Grand Palais, in Paris

By "THE SPHERE" MOTORING CORRESPONDENT

BRITISH cars created a favourable impression at the Paris Salon. In fact, they dominated the Show and reflected great credit on an industry whose leaders realise they will have to fight hard even to hold their present export position, let alone improve it. The new British models on show in the Grand Palais at the side of the Champs-Elysées covered a wide field. They ranged from the £3,976, 140 m.p.h. Aston Martin DB4 to the Farina-styled, £676 Austin A.40 saloon-cum-estate car; from the £4,493, 2.2-litre Bristol 406 to the £1,493, 6-cylinder Humber Super Snipe.

By comparison, the only country which had anything really new to offer was the U.S. The "Big Three," in sending newly-announced 1959 models to Paris so soon after their "unveiling," showed how anxious they are to halt the sensational drop in sales experienced this year. The Dodge models on show were, in fact, having their world premiere, as they were being displayed more than a week before their official introduction in the U.S.

Of the U.S. cars I liked best the new Buick. This huge saloon from General Motors has been styled with much more taste than is usually shown by Detroit designers. It has bold, sweeping, unfussy lines and chrome has been discreetly used. The line of the wide, sharply-angled tail-fins has been ingeniously carried right forward to the bonnet, where the twin headlamps are angled in harmony with this styling motif. Pillars are so thin and there is so much glass, offering such an excellent field of vision, that one almost wonders about the car's structural strength in the event of a crash, and if there is any danger of any of the windows cracking when the car has to be jacked-up at one corner. By contrast, the same firm's Cadillac Fleetwood, shown on the same stand, is an ugly, vulgar car.

Among the French cars, the model that aroused most interest was the special-bodied version of the Renault Dauphine. Called the Floride, it has Italian-designed coachwork of the Gran Turismo type and is obviously aimed at the specialist market for which the Karman-Ghia version of the Volkswagen already caters. Noteworthy among the other French cars on show were the Prestige model of the air-sprung Citroen DS19. This is a de luxe model for the business-man. In the back seat there is a radio-telephone with which, on pressing a button, the owner can obtain any telephone number within 12 miles of Notre Dame.

Citroen also offer an estate car version of the cheaper, simpler ID19. It has two occasional seats in the cargo compartment which can be folded away when not required. The legs of the passengers using these seats fit comfortably into a well which is made possible by the fact that the Citroen has front-wheel drive.

France's Big Four—Renault, Simca, Citroen and Peugeot—have for the most part been content to continue in production with their 1958 models with only minor alterations to either their looks or mechanical specification. On the Simca V-8 models, which normally have three-speed gear-boxes, there is now an alternative four-speed transmission called "Rushmatic." It gives automatic changes between third and fourth ratios.

To the normal Simca three-speed box has been added the British Laycock de Normanville overdrive unit, and I think it is the first time a foreign firm has adopted this versatile device. A centrifugal governor linked to the speedometer drive changes gear in a manner that the driver can determine by the use of two press buttons on the dashboard. If he presses the button marked "Rush," overdrive fourth gear will engage at 70 m.p.h. and direct third gear will re-engage when the car slows to 55. Press the button marked "Route" and top gear comes in at 30 m.p.h.

On their bigger models Renault offer their Transfluide system of automatic transmission, which uses a torque converter in conjunction with an ordinary gear-box. You could drive all day without moving the gear lever, but to maintain a reasonable speed schedule in hilly country, especially with a full load, it is desirable to make fairly frequent shifts from the "VR" (ville et route) position to the "M" (mountain) position. Peugeot offer a British designed electro-magnetic automatic clutch built by Jaeger under licence from Smiths Motor Accessories. The drive is taken up or disconnected by means of a "belt" of metal powder which freezes solid when an electric charge is passed through it. This forms the basis of a fully-automatic gear-box which Smiths are developing for small family cars.

The German firm of Daimler-Benz had on view at the Salon the new petrol-injection version of the successful Mercedes 220S which has gained a 9 per cent. improvement in acceleration compared with the carburettor model. In England it costs £400 more than the 220S, which continues in production. One of the most impressive models on the Mercedes stand was the handsome 300 model, which uses the British Borg-Warner automatic gear-box. With the windows down, this is virtually an open car with a hard top. It has no central door pillars above the waistline.

LUXURY SALOON: The Simca Vedette Chambord is available with the "Rushmatic" system of semi-automatic transmission. This uses a three-speed gear-box with a British overdrive unit.

FOR THE SPORTSMAN: The Floride, a special version of the 845 c.c. Renault Dauphine, has a streamlined styling with a distinct aeronautical flavour. The coachwork is Italian-designed.

PRACTICAL FOR TOWN AND COUNTRY: A feature of the Citroen ID19 estate car is the two occasional seats in the luggage compartment. These can be folded up when not in use.

FAMILY CAR: The Peugeot 403, one of France's most popular 1½-litre vehicles, is built by the country's fourth largest producer of cars. On some models an automatic clutch is available.

The baby car that most took the eye at the Paris Salon was the Dutch DAF. Making its first appearance outside Holland, this 600 c.c. four-seater saloon with horizontally-opposed twin-cylinder, four-stroke engine is the first car Holland has built for many years. An ingenious system of V-belts and expanding pulleys gives the DAF automatic transmission. When the Eindhoven firm of van Doorne starts selling it for about £400 in the home market next spring it will be the cheapest car in the world with automatic transmission.

Two other thoroughly practical baby cars on show in Paris were the 400 c.c. two-stroke Vespa, made in France under licence from the Italian scooter firm, with four wheels and four seats, and the 600 c.c. N.S.U. Prinz, which uses a vertical twin four-stroke engine. I have recently driven both these cars and consider they have a lot to offer as cheap, parkable runabouts.

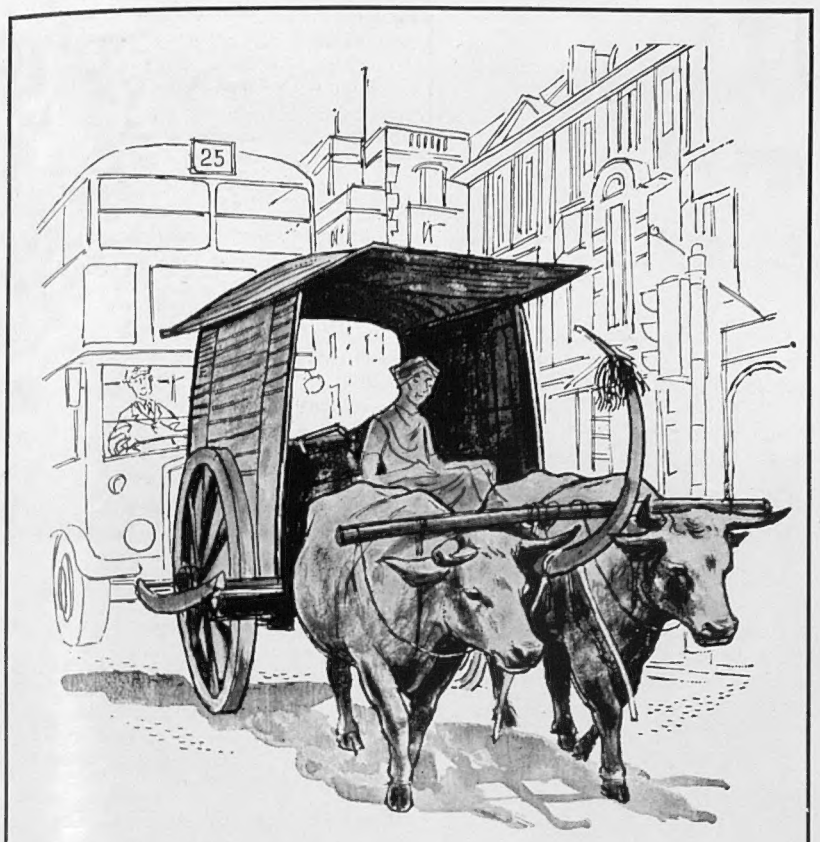
Now for some more news about British cars. Sir William Lyons has announced an important addition to his Jaguar range: the Mark IX saloon, a 110 m.p.h. car with 3,781 c.c. engine, Dunlop disc brakes on all four wheels and Burman power-assisted steering. The new model looks much the same as the existing Mark 8 saloon but its bigger engine develops 220 brake horse-power at 5,500 revolutions a minute—an increase of 15 over the 3½-litre engine. The bigger unit is fitted to give increased torque rather than a higher top speed and the new Mark IX has vivid acceleration in the medium and lower speed ranges. With an ordinary gear-box the new saloon costs £1,994 17s., tax included. A Laycock overdrive unit can be had for £67 10s. extra and Borg-Warner automatic transmission is available for an extra £168, tax being included in both these figures. The Jaguar XK150 open two-seater, deliveries of which have up to now been reserved for the U.S., is now available on the home market, the price of the cheapest version being £1,939 7s. Overdrive and automatic gear-box are optional extras.

Armstrong Siddeley Motors Ltd. have announced a new luxury version of their Sapphire 346—the Star Sapphire. It has a 3,990 c.c. engine developing 165 b.h.p. at 4,250 r.p.m., and is fitted with Borg-Warner gear-box, powered steering and Girling disc brakes on the front wheels—all for £2,645 17s., tax included. The "over-square" engine—bore 97 mm., stroke 90 mm.—has a compression ratio of 7·5 to 1 and is fitted with twin Stromberg carburettors. The car is generally similar to the Sapphire 346 but the suspension has been redesigned and the car is luxuriously finished and fitted out inside with concealed steps, separate heating and ventilating systems for front and rear compartments and a rear window demister.

The new Humber Super Snipe had a reception at the Paris Salon that must have gladdened the heart of Sir William Rootes. I was able to try out this 2·6-litre, 6-cylinder, six-seater in France and I liked it very much. It is excellent value for money, the price being less than £1,500 in its basic form. I tried out a number of different versions of the new Snipe, from the model which has a three-speed, all-synchromesh gear-box to the de luxe model with powered steering, automatic gear-box and fully reclining seats at the front.

I found the de luxe version a superb motor-car which should keep driver fatigue to a minimum on the longest journey. The power-assisted steering does not completely deprive the driver of the "feel" of his wheels on the road, and that is a good thing. Some inexperienced drivers might find themselves in a bit of difficulty on a tricky corner taken fast, because powered steering does not give the same kind of danger signals as a car steered manually. But the advantages of this incredibly light, positive steering far outweigh any faults it might have. On the Rootes stand were the new 1½-litre Hillman Minx and the 1959 2¼-litre Humber Hawk which has the facia and doors trimmed with burr walnut.

Another new British car which earned golden opinions was the Aston Martin DB4, a 140 m.p.h. four-seater with disc brakes which is powered by a new 6-cylinder engine of 3·7 litres. A short run in this handsome car outside Paris was sufficient to show what Mr. David Brown is getting at when he claims that his new DB4 is the world's safest fast car. It is a joy to drive.



Bullock Cart in Bond Street

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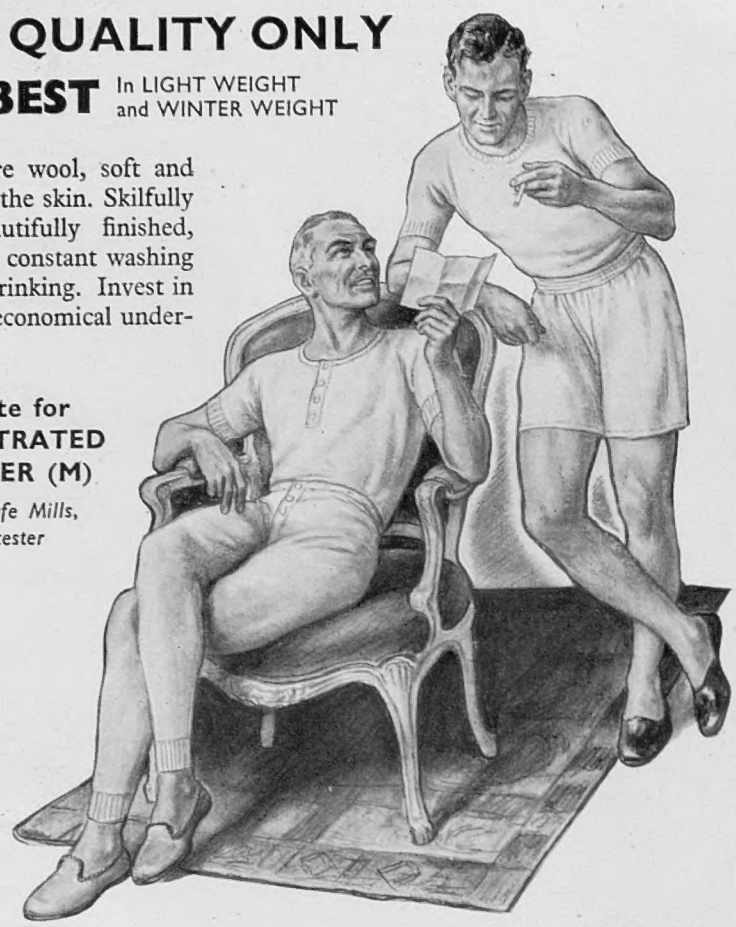

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